

ARPAE
Agenzia regionale per la prevenzione, l'ambiente e l'energia
dell'Emilia - Romagna

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Atti amministrativi

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|--------------------------------------|---|
| Deliberazione del Direttore Generale | n. DEL-2022-157 del 16/12/2022 |
| Oggetto | Struttura Idro-Meteo-Clima. Adesione al Progetto LIFE-2021-STRAT-CLIMA-SIP-two-stage “CLIMate Adaptation for the PO river basin district - LIFE CLIMAX PO”. |
| Proposta | n. PDEL-2022-154 del 14/12/2022 |
| Struttura proponente | Struttura Idro-Meteo-Clima |
| Dirigente proponente | Nanni Sandro |
| Responsabile del procedimento | Nanni Sandro |

Questo giorno 16 (sedici) dicembre 2022 (duemilaventidue), presso la sede di Via Po n. 5, in Bologna, il Direttore Generale, Dott. Giuseppe Bortone, delibera quanto segue.

Oggetto: Struttura Idro-Meteo-Clima. Adesione al Progetto LIFE-2021-STRAT-CLIMA-SIP-two-stage “CLIMate Adaptation for the PO river basin district - LIFE CLIMAX PO”.

RICHIAMATO:

- il Regolamento (UE) 2021/783 del Parlamento europeo e del Consiglio del 29 aprile 2021, che istituisce il Programma per l’ambiente e l’azione per il clima (LIFE 2021-2027) e abroga il Regolamento (UE) n. 1293/2013 istitutivo del precedente Programma LIFE 2014-2020;

RILEVATO:

- che il Programma per l’Ambiente e l’Azione per il Clima 2021-2024 (“Programma LIFE”), in continuità con i precedenti programmi LIFE, svolge un ruolo essenziale nel contribuire al passaggio ad un’economia sostenibile, circolare, efficiente in termini di energia, basata sulle energie rinnovabili, climaticamente neutra e resiliente ai cambiamenti climatici;
- che il Regolamento n. 2021/783, quadro di riferimento della dotazione finanziaria per l’attuazione del “Programma LIFE” per il periodo 2021-2027, fornisce sostegno a misure e progetti che contribuiscono a tutelare, ripristinare e migliorare la qualità dell’ambiente, compresi l’aria, l’acqua e il suolo, e ad interrompere e invertire il processo di perdita della biodiversità, nonché a contrastare il degrado degli ecosistemi;
- che il “Programma LIFE” è articolato in due programmi: il programma “Ambiente”, che sostiene iniziative correlate a natura, biodiversità, economia circolare e qualità della vita, e il programma “Azione per il Clima”, che promuove iniziative per la mitigazione e l’adattamento ai cambiamenti climatici e la transizione all’energia pulita;
- che l’accesso alle opportunità finanziarie previste dal Programma LIFE avviene tramite procedura selettiva con presentazione di proposte progettuali a seguito di emanazione di specifici bandi;
- che la partecipazione a progetti può avvenire sotto forma di beneficiario incaricato del coordinamento, beneficiario associato, cofinanziatore e subfornitore;

DATO ATTO:

- che nel mese di luglio 2021 è stato pubblicato il bando “Strategic Nature and Integrated Projects (SNAP/SIP) (LIFE-2021-STRAT-two-stage)” per la selezione di progetti strategici integrati afferenti al programma “Azione per il Clima”;
- che, nell’ambito del suddetto bando, Arpa Emilia-Romagna ha partecipato alla stesura della proposta progettuale “CLIMate Adaptation for the PO river basin district - LIFE

CLIMAX PO”, in qualità di beneficiario partner;

- che la citata proposta è stata presentata dall’Autorità di Bacino del fiume Po, quale beneficiario coordinatore, entro i termini previsti dal bando nell’apposita piattaforma web;
- che gli obiettivi principali del progetto “LIFE CLIMAX PO” sono:
 - promuovere l’adattamento ai cambiamenti climatici attraverso una gestione intelligente delle risorse idriche a scala di distretto idrografico, attraverso l’attuazione di misure basate sulle caratteristiche locali e sulle peculiarità climatiche presenti nel comprensorio;
 - migliorare la governance distrettuale multilivello nella gestione delle risorse idriche, garantendo un coordinamento tecnico e la coerenza;
 - promuovere una conoscenza condivisa del clima (in termini di strumenti e metodologie);
 - favorire la resilienza climatica attraverso azioni pilota replicabili nel bacino idrografico e non solo;
- che la partecipazione di Arpa - Struttura Idro-Meteo-Clima risulta motivata dall’esperienza maturata in termini di supporto alla gestione integrata della risorsa idrica, monitoraggio e impatti legati all’occorrenza di periodi siccitosi e dei rischi idraulici per eccessi di precipitazione, nonché dall’esperienza maturata nei precedenti progetti strategici per la gestione dei rischi meteo-marini sulla fascia costiera;
- che la Commissione Europea - European climate, infrastructure and environment executive agency (CINEA) ha comunicato ad Autorità di Bacino del fiume Po - in quanto Beneficiario coordinatore - il superamento del primo livello di valutazione e la contestuale ammissione al secondo livello di valutazione mediante comunicazione Ares(2021)7728201 del 14/12/2021 per il progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO;
- che la Commissione Europea - European climate, infrastructure and environment executive agency (CINEA) ha comunicato ad Autorità di Bacino del fiume Po - in quanto Beneficiario coordinatore - la collocazione nella lista di riserva per l’accesso al finanziamento, secondo la comunicazione Ares(2022)4861198 del 04/07/2022 e successivamente, mediante comunicazione Ares(2022)6123201 del 05/09/2022 l’effettiva ammissione a finanziamento del progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO;

VISTO:

- che, a seguito di negoziazione tra CINEA ed Autorità di Bacino del fiume Po, sono state

definite non solo le azioni progettuali ma anche il relativo quadro finanziario di progetto, comprensivo della quota di finanziamento dell'Unione Europea e delle quote previste a carico di ciascun partecipante;

VERIFICATO:

- che CINEA ed Autorità di Bacino del fiume Po, in qualità di beneficiario coordinatore, sottoscriveranno il Grant Agreement 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO “LIFE IP Climate Adaptation for the Po River basin district”, secondo lo schema allegato al presente atto, e che anche i partner beneficiari, saranno chiamati a sottoscrivere la sovvenzione sul portale dedicato, comunque non oltre il 7/01/2023;
- che il progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO vede coinvolti, oltre ad Arpae, i seguenti Beneficiari:
 - Agenzia Interregionale per il fiume Po (AIPo)
 - Agenzia Regionale per la Protezione Ambientale del Piemonte (Arpa Piemonte)
 - Alma Mater Studiorum - Università di Bologna (UniBo)
 - Associazione Nazionale Consorzi di Gestione e Tutela del Territorio e Acque Irrigue (ANBI)
 - Fondazione Centro Euromediterraneo sui Cambiamenti Climatici (CMCC)
 - Città Metropolitana di Bologna (CMB)
 - Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF)
 - Legambiente Associazione Onlus (Legambiente)
 - Politecnico di Torino
 - Società Metropolitana Acque Torino S.p.a. (SMAT)
 - Regione Emilia-Romagna
 - Regione Piemonte
 - Regione Lombardia
 - Sogesca srl
 - Agenzia Regionale per la Protezione dell'Ambiente della Lombardia (ARPA Lombardia)
 - ANBI Emilia-Romagna
 - Unione Regionale Bonifiche Irrigazioni e Miglioramento Fondiari per la Lombardia (ANBI Lombardia)
 - Unione Regionale Bonifiche Irrigazioni e Miglioramento Fondiari per il Piemonte (ANBI Piemonte)
 - ANBI Veneto

- che Autorità di Bacino del fiume Po, successivamente alla sottoscrizione del Grant Agreement e previo accordo tra i partner, predisporrà il Consortium Agreement, che disciplina i rapporti tra i partner e il loro contributo alle attività e ai costi;

CONSIDERATO:

- che il progetto ha durata pari a 108 mesi, dal 1/02/2023 al 31/01/2032;
- che le attività previste dal progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, per la loro specificità, risultano di competenza della Struttura Idro-Meteo-Clima;
- che, in particolare, il budget complessivo assegnato ad Arpae Emilia-Romagna per la realizzazione del Progetto è pari ad Euro 1.733.410,70 ed è articolato come segue:

| | |
|----------------------|-----------------------|
| Personale | 643.110,00 € |
| Trasferte | 29.900,00 € |
| Servizi esterni | 835.000,00 € |
| Investimenti | 20.000,00 € |
| Altri costi | 92.000,00 € |
| Costi amministrativi | 113.400,70 € |
| Totale | 1.733.410,70 € |

- che il contributo che Arpae riceverà dall'Unione Europea, tramite il beneficiario coordinatore, per la realizzazione del progetto sarà pari a Euro 1.040.046,42;
- che i restanti Euro 693.364,28 rappresentano la quota di cofinanziamento di Arpae;
- che, nello svolgimento delle attività progettuali, ciascun partner può fare ricorso a fornitori esterni;
- che l'aggiudicazione di eventuali contratti di fornitura deve avvenire nel rispetto di quanto previsto dal Regolamento per la realizzazione dei progetti LIFE e in conformità alle norme nazionali e alle direttive comunitarie in materia di appalti pubblici, garantendo il rispetto dei principi di trasparenza e di pari trattamento dei potenziali fornitori ed evitando ogni conflitto d'interesse;

RITENUTO:

- di prendere atto dell'ammissione a finanziamento del Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, di cui Arpae è beneficiario associato;
- che la Struttura Idro-Meteo-Clima possa fornire competenze e risorse nell'ambito di tale progetto, che risulta di estremo interesse per l'Agenzia;
- opportuna la partecipazione di Arpae al Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO garantendo il cofinanziamento di Euro 693.364,28, quota di costi non

sostenuta dal finanziamento comunitario;

- di delegare il Responsabile della Struttura Idro-Meteo-Clima ad agire in nome e per conto di Arpae, nell'ambito del Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, nei confronti del beneficiario coordinatore e di tutti i partner del progetto, ed in particolare a sottoscrivere il Grant Agreement - il cui schema è allegato al presente atto quale parte integrante e sostanziale - finalizzato a disciplinare la collaborazione tra i beneficiari nell'ambito del Progetto;
- di demandare al Responsabile della Struttura Idro-Meteo-Clima l'adozione di ogni atto che si renda necessario per garantire lo svolgimento delle attività progettuali e l'affidamento a terzi dei servizi, secondo quanto previsto dal Regolamento Arpae per il decentramento amministrativo, nel rispetto dell'accordo fra i Partner e del budget assegnato;

DATO ATTO:

- che il budget assegnato ad Arpae Emilia-Romagna per la realizzazione del Progetto nella misura di Euro 1.733.410,70 è gestito dalla Struttura Idro-Meteo-Clima;
- che la Struttura Idro-Meteo-Clima potrà, inoltre, nell'arco della durata del progetto coinvolgere nella realizzazione delle attività altre strutture di Arpae, previo accordo con i relativi Responsabili;

SU PROPOSTA:

- del Responsabile della Struttura Idro-Meteo-Clima, Dott. Sandro Nanni, il quale ha espresso il proprio parere favorevole in ordine alla regolarità amministrativa del presente provvedimento;

ACQUISITI:

- i pareri favorevoli espressi, ai sensi dell'art. 9 della L.R. n. 44/1995, dal Direttore Tecnico, Dott. Eriberto de' Munari, e dal Direttore Amministrativo, Dott.ssa Lia Manaresi;

DATO ATTO:

- del parere di regolarità contabile espresso dal Responsabile del Servizio Amministrazione, Bilancio e Controllo Economico, Dott. Giuseppe Bacchi Reggiani, ai sensi del Regolamento Arpae per l'adozione degli atti di gestione delle risorse dell'Agenzia;
- che il responsabile del procedimento è il Dott. Sandro Nanni;

DELIBERA

1. di prendere atto dell'approvazione da parte della Commissione Europea del Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, ammesso a finanziamento ai sensi del

Programma comunitario LIFE Sottoprogramma Azione per il Clima;

2. di dare atto che Arpae riveste il ruolo di beneficiario associato nell'ambito del progetto CLIMAX PO, di cui è Beneficiario incaricato del coordinamento Autorità di Bacino del fiume Po;
3. di dare atto che il Progetto di cui trattasi ha durata di mesi 108 a partire dal 1/02/2023 e pertanto si concluderà il 31/01/2032;
4. di dare atto che il costo complessivo stimato per la realizzazione delle attività di Arpae previste nel Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO è pari ad Euro 1.733.410,70 coperto fino all'importo massimo di Euro 1.040.046,42 dal contributo della Commissione Europea e per il rimanente attraverso finanziamento proprio;
5. di dare atto che per Arpae il soggetto competente all'attuazione e alla gestione del Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, è la Struttura Idro-Meteo-Clima, cui è assegnato il budget complessivo di competenza di Arpae;
6. di delegare il Responsabile della Struttura Idro-Meteo-Clima ad agire in nome e per conto di Arpae Emilia-Romagna, nell'ambito del Progetto 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO, nei confronti del beneficiario coordinatore e di tutti i partner del progetto, ed in particolare a sottoscrivere il Grant Agreement, secondo lo schema in allegato al presente atto quale parte integrante e sostanziale, nonché eventuali ulteriori documenti finalizzati a disciplinare la collaborazione tra i beneficiari nell'ambito del Progetto;
7. di demandare al Responsabile della Struttura Idro-Meteo-Clima l'adozione di ogni atto che si renda necessario per garantire lo svolgimento delle attività progettuali;
8. di individuare nei seguenti collaboratori le competenze e le professionalità necessarie alla partecipazione di Arpae Struttura Idro-Meteo-Clima al progetto:
 - Sandro Nanni, con funzione di coordinamento generale della partecipazione di Arpae al progetto;
 - Pier Paolo Alberoni, con funzioni di supporto al coordinamento tecnico della partecipazione di Arpae al progetto e con funzioni di coordinamento tecnico della partecipazione dello Staff Modellistica Meteorologica Numerica e Radarmeteorologia;
 - Anna Fornasiero, tecnico esperto in radarmeteorologia e stime di precipitazioni;
 - Virginia Poli, tecnico esperto in radarmeteorologia e sistemi di nowcasting;
 - Miria Celano, tecnico esperto in radarmeteorologia e utilizzo di dati satellitari;
 - Fabrizio Pizzotti, tecnico esperto in radarmeteorologia e gestione della strumentazione;
 - Andrea Valentini, tecnico esperto in modellistica, sistemi osservativi e sistemi di

allertamento marino-costiero;

- Silvia Unguendoli, tecnico esperto in modellistica, sistemi osservativi e sistemi di allertamento marino-costiero;
- Cinzia Alessandrini, con funzioni di supporto al coordinamento tecnico della partecipazione dell'Osservatorio Clima alle attività climatologiche;
- Giulia Villani, tecnico esperto in modellazione agrometeorologica;
- Valentina Pavan, tecnico esperto in dati climatici e previsioni stagionali;
- Rodica Tomozeiu, tecnico esperto in modellazione climatica ai fini della valutazione di scenari a scala locale;
- Gabriele Antolini, tecnico esperto in modellazione climatica ai fini dell'individuazione di indicatori climatici di impatto;
- Fabrizio Nerozzi, tecnico a supporto della programmazione ai fini della produzione di scenari climatici locali;
- Elisa Comune, con funzioni di coordinamento tecnico della partecipazione del Servizio idrografia e idrologia regionale e distretto Po alle attività di progetto inerenti la modellazione idrologica-idraulica;
- Giuseppe Ricciardi, tecnico esperto a supporto del coordinamento della modellistica idrologica-idraulica con le tematiche di progetto inerenti il sistema di allertamento delle piene fluviali;
- Fabrizio Tonelli, tecnico esperto in modellazione idrologica-idraulica;
- Giulia Caiani, referente amministrativo e finanziario per la gestione del progetto;
- Luisella Iervolino, collaboratore amministrativo per la rendicontazione dei costi del progetto;
- Annalisa Massano, collaboratore amministrativo per la fatturazione passiva e la gestione dei rapporti con i fornitori.

PARERE: FAVOREVOLE

IL DIRETTORE TECNICO

(F.to Dott. Eriberto de' Munari)

IL DIRETTORE AMMINISTRATIVO

(F.to Dott.ssa Lia Manaresi)

IL DIRETTORE GENERALE

(F.to Dott. Giuseppe Bortone)



EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY (CINEA)

CINEA.D – Natural resources, climate, sustainable blue economy and clean energy
D.1 – LIFE Energy + LIFE Climate

GRANT AGREEMENT

Project 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO

PREAMBLE

This **Agreement** ('the Agreement') is **between** the following parties:

on the one part,

the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and

on the other part,

1. 'the coordinator':

AUTORITA DI BACINO DEL FIUME PO (ADBPO), PIC 989041683, established in STRADA GARIBALDI 75, PARMA 43121, Italy,

and the following other beneficiaries, if they sign their 'accession form' (see Annex 3 and Article 40):

2. **AGENZIA INTERREGIONALE PER IL FIUME PO (AIPo)**, PIC 941034055, established in VIA GIUSEPPE GARIBALDI 75, Parma 43100, Italy,

3. **AGENZIA REGIONALE PER LA PREVENZIONE, L'AMBIENTE E L'ENERGIA DELL'EMILIA-ROMAGNA (ARPAE)**, PIC 999454633, established in VIA PO 5, BOLOGNA 40139, Italy,

4. **AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE (ARPAP)**, PIC 999468892, established in VIA PIO VII 9, TORINO (TURIN) 10135, Italy,

5. **ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA (UNIBO)**, PIC 999993953, established in VIA ZAMBONI 33, BOLOGNA 40126, Italy,

6. **ASSOCIAZIONE NAZIONALE DELLE BONIFICHE, DELLE IRRIGAZIONI E DEI MIGLIORAMENTI FONDIARI (ANBI)**, PIC 884896081, established in VIA DI SANTA TERESA 23, ROMA 00198, Italy,

7. **FONDAZIONE CENTRO EURO-MEDITERRANEOSUI CAMBIAMENTI CLIMATICI (CMCC)**, PIC 999419422, established in VIA MARCO BIAGI 5, LECCE 73100, Italy,

8. **CITTA METROPOLITANA DI BOLOGNA (CMBO)**, PIC 933452729, established in VIA ZAMBONI 13, BOLOGNA 40126, Italy,
9. **ENTE REGIONALE PER I SERVIZI ALL' AGRICOLTURA E ALLE FORESTE (ERSAF)**, PIC 899156245, established in VIA POLA 12, MILANO 20124, Italy,
10. **LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE)**, PIC 986523951, established in VIA SALARIA 403, ROMA 00199, Italy,
11. **POLITECNICO DI TORINO (POLITO)**, PIC 999977754, established in CORSO DUCA DEGLI ABRUZZI 24, TORINO 10129, Italy,
12. **Società Metropolitana Acque Torino S.p.A. (SMAT)**, PIC 991745946, established in Corso XI Febbraio 14, Torino 10152, Italy,
13. **REGIONE EMILIA ROMAGNA (RER)**, PIC 999482375, established in VIALE ALDO MORO 52, BOLOGNA 40127, Italy,
14. **REGIONE PIEMONTE (RPiemonte)**, PIC 999476943, established in PIAZZA CASTELLO 165, TORINO 10122, Italy,
15. **REGIONE LOMBARDIA (RLombardia)**, PIC 999654065, established in PIAZZA CITTA DI LOMBARDIA 1, MILANO 20124, Italy,
16. **SOGESCA s.r.l. (SOGESCA)**, PIC 984301778, established in Via Pitagora 11 a, RUBANO 35030, Italy,
17. **AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE (ARPA) DELLA LOMBARDIA (ARPA Lombardia)**, PIC 954110431, established in VIA IPPOLITO ROSELLINI 17, MILANO 20124, Italy,
18. **ANBI - EMILIA ROMAGNA (ANBI-ER)**, PIC 887507709, established in VIA ERNESTO MASI 8, BOLOGNA 40137, Italy,
19. **UNIONE REGIONALE BONIFICHE IRRIGAZIONI E MIGLIORAMENTO FONDIARI PER LA LOMBARDIA (ANBI Lombardia)**, PIC 887622848, established in VIA PONCHIELLI 5, CREMONA 26100, Italy,
20. **UNIONE REGIONALE BONIFICHE IRRIGAZIONI PIEMONTE (ANBI PIEMONTE)**, PIC 887727123, established in VIA NEGRONI 7, NOVARA 28100, Italy,
21. **ASSOCIAZIONE REGIONALE DEI CONSORZI DI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE (ANBIVENETO)**, PIC 887733428, established in CANNAREGIO 122, VENEZIA 30121, Italy,

Unless otherwise specified, references to ‘beneficiary’ or ‘beneficiaries’ include the coordinator and affiliated entities (if any).

If only one beneficiary signs the grant agreement (‘mono-beneficiary grant’), all provisions referring to the ‘coordinator’ or the ‘beneficiaries’ will be considered — mutatis mutandis — as referring to the beneficiary.

The parties referred to above have agreed to enter into the Agreement.

By signing the Agreement and the accession forms, the beneficiaries accept the grant and agree to implement the action under their own responsibility and in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

The Agreement is composed of:

Preamble

Terms and Conditions (including Data Sheet)

Annex 1 Description of the action¹

Annex 2 Estimated budget for the action

Annex 2a Additional information on unit costs and contributions (if applicable)

Annex 3 Accession forms (if applicable)²

Annex 3a Declaration on joint and several liability of affiliated entities (if applicable)³

Annex 4 Model for the financial statements

Annex 5 Specific rules (if applicable)

¹ Template published on [Portal Reference Documents](#).

² Template published on [Portal Reference Documents](#).

³ Template published on [Portal Reference Documents](#).

TERMS AND CONDITIONS

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DATA SHEET

1. General data

Project summary:

| Project summary |
|---|
| <p>Climate change is leading to great environmental challenges, which require compelling and urgent actions, especially in Southern Europe and the Mediterranean area. The Italian National Adaptation Strategy (NAS) recognises the Po River Basin District as the national special case and pilot area for climate adaptation in the water management sector. CLIMA PO overall objective is to boost adaptation to climate change through climate-smart water resources management at the river basin district scale by implementing NAS measures tailored-made on the local characteristics and climatic peculiarities present in the district. This will be done by improving district governance in water resource management and ensuring policy, funding and technical coordination and coherence; shared climate knowledge production (tools and methodologies); building capacity and awareness, increasing stakeholder participation; improving water security and climate resilience through selected pilot actions replicable in the river basin and beyond; mobilizing complementary funding that will support the implementation of extended and costly measures focused on renaturation, flood risk mitigation and prevention, integration of planning tools, and activating public engagement. CLIMA PO will launch a Multilevel Governance Deal with dedicated task forces to foster a coordinated planning approach at National, Regional and Local level starting from the existing River Basin Management Plan and leading to the mobilization and coordination of several sources of funding (420+ mil€ out of which 350+ mil€ already granted). CLIMA PO is led by the National Po River Basin District Authority (ADBPO) chaired directly by the Minister for Ecologic Transition and responsible for the implementation of the NAS at district level. The consortium covers the whole geographical river basin, all levels of Governance (National, Regional, Local) and necessary competences with 3 major research institutes on board.</p> |

Keywords:

- Projects targeting climate adaptation-related plans/strategies
- NAS, Italy, climate, adaptation, strategy, measures, Po, river, basin, management, plan, water, drought, district, region, nature, based, solution, ecosystem, approach, infrastructure, grey, green

Project number: 101069928

Project name: CLIMate Adaptation for the PO river basin district

Project acronym: LIFE21-IPC-IT-LIFE CLIMAX PO

Call: LIFE-2021-STRAT-two-stage

Topic: LIFE-2021-STRAT-CLIMA-SIP-two-stage

Type of action: LIFE Project Grants

Granting authority: European Climate, Infrastructure and Environment Executive Agency

Grant managed through EU Funding & Tenders Portal: Yes (eGrants)

Project starting date: fixed date: 1 February 2023

Project end date: 31 January 2032

Project duration: 108 months

Consortium agreement: Yes

2. Participants

List of participants:

| N° | Role | Short name | Legal name | Ctry | PIC | Total eligible costs (BEN and AE) | Max grant amount |
|----|------|------------|--|------|-----------|-----------------------------------|------------------|
| 1 | COO | ADBPO | AUTORITA DI BACINO DEL FIUME PO | IT | 989041683 | 2 697 577.00 | 1 618 546.20 |
| 2 | BEN | AIPo | AGENZIA INTERREGIONALE PER IL FIUME PO | IT | 941034055 | 870 038.40 | 522 023.04 |

| N° | Role | Short name | Legal name | Ctry | PIC | Total eligible costs (BEN and AE) | Max grant amount |
|--------------|------|----------------|---|------|-----------|-----------------------------------|------------------|
| 3 | BEN | ARPAE | AGENZIA REGIONALE PER LA PREVENZIONE, L'AMBIENTE E L'ENERGIA DELL'EMILIA-ROMAGNA | IT | 999454633 | 1 733 410.70 | 1 040 046.42 |
| 4 | BEN | ARPAP | AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE | IT | 999468892 | 934 840.81 | 560 904.48 |
| 5 | BEN | UNIBO | ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA | IT | 999993953 | 1 368 386.62 | 821 031.97 |
| 6 | BEN | ANBI | ASSOCIAZIONE NAZIONALE DELLE BONIFICHE, DELLE IRRIGAZIONI E DEI MIGLIORAMENTI FONDIARI | IT | 884896081 | 242 900.70 | 145 740.42 |
| 7 | BEN | CMCC | FONDAZIONE CENTRO EURO-MEDITERRANEOSUI CAMBIAMENTI CLIMATICI | IT | 999419422 | 1 343 886.83 | 806 332.09 |
| 8 | BEN | CMBO | CITTA METROPOLITANA DI BOLOGNA | IT | 933452729 | 487 256.60 | 292 353.96 |
| 9 | BEN | ERSAF | ENTE REGIONALE PER I SERVIZI ALL' AGRICOLTURA E ALLE FORESTE | IT | 899156245 | 2 070 236.00 | 1 242 141.60 |
| 10 | BEN | LEGAMBIENTE | LEGAMBIENTE ASSOCIAZIONE ONLUS | IT | 986523951 | 903 960.61 | 542 376.36 |
| 10.1 | AE | Legamb Lomb | LEGAMBIENTE LOMBARDIA ONLUS | IT | 935375657 | 170 952.83 | 102 571.69 |
| 10.2 | AE | Legamb Veneto | LEGAMBIENTE VENETO ASSOCIAZIONE DI PROMOZIONE SOCIALE | IT | 896190373 | 170 952.83 | 102 571.69 |
| 10.3 | AE | LEGAMB PVDA | LEGAMBIENTE PIEMONTE E VALLE D'AOSTA ONLUS | IT | 929074246 | 170 952.83 | 102 571.69 |
| 10.4 | AE | LEGAMB ER | LEGAMBIENTE EMILIA-ROMAGNA | IT | 925869657 | 170 952.83 | 102 571.69 |
| 11 | BEN | POLITO | POLITECNICO DI TORINO | IT | 999977754 | 2 001 235.98 | 1 200 741.58 |
| 12 | BEN | SMAT | Società Metropolitana Acque Torino S.p.A. | IT | 991745946 | 311 999.16 | 187 199.49 |
| 13 | BEN | RER | REGIONE EMILIA ROMAGNA | IT | 999482375 | 153 722.62 | 92 233.57 |
| 14 | BEN | RPiemonte | REGIONE PIEMONTE | IT | 999476943 | 403 265.88 | 241 959.52 |
| 15 | BEN | RLombardia | REGIONE LOMBARDIA | IT | 999654065 | 291 760.11 | 175 056.06 |
| 16 | BEN | SOGESCA | SOGESCA s.r.l. | IT | 984301778 | 680 990.80 | 408 594.48 |
| 17 | BEN | ARPA Lombardia | AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE (ARPA) DELLA LOMBARDIA | IT | 954110431 | 202 454.70 | 121 472.82 |
| 18 | BEN | ANBI-ER | ANBI - EMILIA ROMAGNA | IT | 887507709 | 128 079.00 | 76 847.40 |
| 19 | BEN | ANBI Lombardia | UNIONE REGIONALE BONIFICHE IRRIGAZIONI E MIGLIORAMENTO FONDIARI PER LA LOMBARDIA | IT | 887622848 | 134 905.60 | 80 943.36 |
| 20 | BEN | ANBI PIEMONTE | UNIONE REGIONALE BONIFICHE IRRIGAZIONI PIEMONTE | IT | 887727123 | 114 618.40 | 68 771.04 |
| 21 | BEN | ANBIVENETO | ASSOCIAZIONE REGIONALE DEI CONSORZI DI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE | IT | 887733428 | 131 599.30 | 78 959.57 |
| Total | | | | | | 17 890 937.14 | 10 734 562.19 |

Coordinator:

– AUTORITA DI BACINO DEL FIUME PO (ADBPO)

3. Grant**Maximum grant amount, total estimated eligible costs and contributions and funding rate:**

| Total eligible costs (BEN and AE) | Funding rate (%) | Maximum grant amount (Annex 2) | Maximum grant amount (award decision) |
|-----------------------------------|------------------|--------------------------------|---------------------------------------|
| 17 890 937.14 | 60 | 10 734 562.19 | 10 734 562.19 |

Grant form: Budget-based

Grant mode: Action grant

Budget categories/activity types:

- A. Personnel costs
 - A.1 Employees, A.2 Natural persons under direct contract, A.3 Seconded persons
 - A.4 SME owners and natural person beneficiaries
 - A.5 Volunteers
- B. Subcontracting costs
- C. Purchase costs
 - C.1 Travel and subsistence
 - C.2 Equipment
 - C.3 Other goods, works and services
- D. Other cost categories
 - D.1 Financial support to third parties
 - D.2 Land purchase
- E. Indirect costs

Cost eligibility options:

- Standard supplementary payments
- Limitation for subcontracting
- Travel and subsistence:
 - Travel: Actual costs
 - Accommodation: Actual costs
 - Subsistence: Actual costs
- Equipment: full costs and depreciation for listed equipment
- Costs for providing financial support to third parties (actual cost; max amount for each recipient: EUR 60 000.00)
- Indirect cost flat-rate: 7% of the eligible direct costs (categories A-D, except volunteers costs and exempted specific cost categories, if any)
- VAT: Yes
- Other ineligible costs

Budget flexibility: Yes (no flexibility cap)

4. Reporting, payments and recoveries

4.1 Continuous reporting (art 21)

Deliverables: see Funding & Tenders Portal Continuous Reporting tool

4.2 Periodic reporting and payments

Reporting and payment schedule (art 21, 22):

| Reporting | | | | | Payments | |
|-------------------|------------|----------|-----------------|---------------------------------------|----------------------|--|
| Reporting periods | | | Type | Deadline | Type | Deadline (time to pay) |
| RP No | Month from | Month to | | | | |
| | | | | | Initial prefinancing | 30 days from entry into force/ financial guarantee (if required) – whichever is the latest |
| 1 | 1 | 36 | Periodic report | 60 days after end of reporting period | Interim payment | 90 days from receiving periodic report |
| 2 | 37 | 72 | Periodic report | 60 days after end of reporting period | Interim payment | 90 days from receiving periodic report |
| 3 | 73 | 108 | Periodic report | 60 days after end of reporting period | Final payment | 90 days from receiving periodic report |

Prefinancing payments and guarantees:

| Prefinancing payment | | Prefinancing guarantee | | |
|--------------------------|--------------|------------------------|--------------------------|-----|
| Type | Amount | Guarantee amount | Division per participant | |
| Prefinancing 1 (initial) | 3 220 368.66 | n/a | 1 - ADBPO | n/a |
| | | | 2 - AIPo | n/a |
| | | | 3 - ARPAAE | n/a |
| | | | 4 - ARPAP | n/a |
| | | | 5 - UNIBO | n/a |
| | | | 6 - ANBI | n/a |
| | | | 7 - CMCC | n/a |
| | | | 8 - CMBO | n/a |
| | | | 9 - ERSAF | n/a |
| | | | 10 - LEGAMBIENTE | n/a |
| | | | 10.1 - Legamb Lomb | n/a |
| | | | 10.2 - Legamb Veneto | n/a |
| | | | 10.3 - LEGAMB PVDA | n/a |
| | | | 10.4 - LEGAMB ER | n/a |
| | | | 11 - POLITICO | n/a |
| | | | 12 - SMAT | n/a |
| | | | 13 - RER | n/a |
| | | | 14 - RPiemonte | n/a |
| | | | 15 - RLombardia | n/a |
| | | | 16 - SOGESCA | n/a |
| 17 - ARPA Lombardia | n/a | | | |
| 18 - ANBI-ER | n/a | | | |
| 19 - ANBI Lombardia | n/a | | | |
| 20 - ANBI PIEMONTE | n/a | | | |

| Prefinancing payment | | Prefinancing guarantee | |
|----------------------|--------|------------------------|--------------------------|
| Type | Amount | Guarantee amount | Division per participant |
| | | | 21 - ANBIVENETO |
| | | | n/a |

Reporting and payment modalities (art 21, 22):

Mutual Insurance Mechanism (MIM): No

Restrictions on distribution of initial prefinancing: The prefinancing may be distributed only if the minimum number of beneficiaries set out in the call conditions (if any) have acceded to the Agreement and only to beneficiaries that have acceded.

Interim payment ceiling (if any): 90% of the maximum grant amount

No-profit rule: Yes

Late payment interest: ECB + 3.5%

Bank account for payments:

IT68T0306912765100000046041

Conversion into euros: Double conversion

Reporting language: Language of the Agreement

4.3 Certificates (art 24):

Certificates on the financial statements (CFS):

Conditions:

Schedule: interim/final payment, if threshold is reached

Standard threshold (beneficiary-level):

- financial statement: requested EU contribution to costs \geq EUR 500 000.00

4.4 Recoveries (art 22)**First-line liability for recoveries:**

Beneficiary termination: Beneficiary concerned

Final payment: Coordinator

After final payment: Beneficiary concerned

Joint and several liability for enforced recoveries (in case of non-payment):

Limited joint and several liability of other beneficiaries — up to the maximum grant amount of the beneficiary

Joint and several liability of affiliated entities — n/a

5. Consequences of non-compliance, applicable law & dispute settlement forum

Applicable law (art 43):

Standard applicable law regime: EU law + law of Belgium

Dispute settlement forum (art 43):

Standard dispute settlement forum:

EU beneficiaries: EU General Court + EU Court of Justice (on appeal)

Non-EU beneficiaries: Courts of Brussels, Belgium (unless an international agreement provides for the enforceability of EU court judgements)

6. Other

Specific rules (Annex 5): Yes

Standard time-limits after project end:

Confidentiality (for X years after final payment): 5

Record-keeping (for X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Reviews (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Audits (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Extension of findings from other grants to this grant (no later than X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Impact evaluation (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

CHAPTER 1 GENERAL

ARTICLE 1 — SUBJECT OF THE AGREEMENT

This Agreement sets out the rights and obligations and terms and conditions applicable to the grant awarded for the implementation of the action set out in Chapter 2.

ARTICLE 2 — DEFINITIONS

For the purpose of this Agreement, the following definitions apply:

Actions — The project which is being funded in the context of this Agreement.

Grant — The grant awarded in the context of this Agreement.

EU grants — Grants awarded by EU institutions, bodies, offices or agencies (including EU executive agencies, EU regulatory agencies, EDA, joint undertakings, etc.).

Participants — Entities participating in the action as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties.

Beneficiaries (BEN) — The signatories of this Agreement (either directly or through an accession form).

Affiliated entities (AE) — Entities affiliated to a beneficiary within the meaning of Article 187 of EU Financial Regulation 2018/1046⁴ which participate in the action with similar rights and obligations as the beneficiaries (obligation to implement action tasks and right to charge costs and claim contributions).

Associated partners (AP) — Entities which participate in the action, but without the right to charge costs or claim contributions.

Purchases — Contracts for goods, works or services needed to carry out the action (e.g. equipment, consumables and supplies) but which are not part of the action tasks (see Annex 1).

Subcontracting — Contracts for goods, works or services that are part of the action tasks (see Annex 1).

In-kind contributions — In-kind contributions within the meaning of Article 2(36) of EU Financial

⁴ For the definition, see Article 187 Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012 ('EU Financial Regulation') (OJ L 193, 30.7.2018, p. 1): "**affiliated entities** [are]:

- (a) entities that form a sole beneficiary [(i.e. where an entity is formed of several entities that satisfy the criteria for being awarded a grant, including where the entity is specifically established for the purpose of implementing an action to be financed by a grant)];
- (b) entities that satisfy the eligibility criteria and that do not fall within one of the situations referred to in Article 136(1) and 141(1) and that have a link with the beneficiary, in particular a legal or capital link, which is neither limited to the action nor established for the sole purpose of its implementation".

Regulation 2018/1046, i.e. non-financial resources made available free of charge by third parties.

Fraud — Fraud within the meaning of Article 3 of EU Directive 2017/1371⁵ and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995⁶, as well as any other wrongful or criminal deception intended to result in financial or personal gain.

Irregularities — Any type of breach (regulatory or contractual) which could impact the EU financial interests, including irregularities within the meaning of Article 1(2) of EU Regulation 2988/95⁷.

Grave professional misconduct — Any type of unacceptable or improper behaviour in exercising one's profession, especially by employees, including grave professional misconduct within the meaning of Article 136(1)(c) of EU Financial Regulation 2018/1046.

Applicable EU, international and national law — Any legal acts or other (binding or non-binding) rules and guidance in the area concerned.

Portal — EU Funding & Tenders Portal; electronic portal and exchange system managed by the European Commission and used by itself and other EU institutions, bodies, offices or agencies for the management of their funding programmes (grants, procurements, prizes, etc.).

CHAPTER 2 ACTION

ARTICLE 3 — ACTION

The grant is awarded for the action **101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO** ('action'), as described in Annex 1.

ARTICLE 4 — DURATION AND STARTING DATE

The duration and the starting date of the action are set out in the Data Sheet (see Point 1).

CHAPTER 3 GRANT

ARTICLE 5 — GRANT

5.1 Form of grant

⁵ Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law (OJ L 198, 28.7.2017, p. 29).

⁶ OJ C 316, 27.11.1995, p. 48.

⁷ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

The grant is an action grant⁸ which takes the form of a budget-based mixed actual cost grant (i.e. a grant based on actual costs incurred, but which may also include other forms of funding, such as unit costs or contributions, flat-rate costs or contributions, lump sum costs or contributions or financing not linked to costs).

5.2 Maximum grant amount

The maximum grant amount is set out in the Data Sheet (see Point 3) and in the estimated budget (Annex 2).

5.3 Funding rate

The funding rate for costs is 60% of the action's eligible costs.

Contributions are not subject to any funding rate.

5.4 Estimated budget, budget categories and forms of funding

The estimated budget for the action is set out in Annex 2.

It contains the estimated eligible costs and contributions for the action, broken down by participant and budget category.

Annex 2 also shows the types of costs and contributions (forms of funding)⁹ to be used for each budget category.

If unit costs or contributions are used, the details on the calculation will be explained in Annex 2a.

5.5 Budget flexibility

The budget breakdown may be adjusted — without an amendment (see Article 39) — by transfers (between participants and budget categories), as long as this does not imply any substantive or important change to the description of the action in Annex 1.

However:

- changes to the budget category for volunteers (if used) always require an amendment
- changes to budget categories with lump sums costs or contributions (if used; including financing not linked to costs) always require an amendment
- changes to budget categories with higher funding rates or budget ceilings (if used) always require an amendment
- addition of amounts for subcontracts not provided for in Annex 1 either require an amendment or simplified approval in accordance with Article 6.2

⁸ For the definition, see Article 180(2)(a) EU Financial Regulation 2018/1046: ‘**action grant**’ means an EU grant to finance “an action intended to help achieve a Union policy objective”.

⁹ See Article 125 EU Financial Regulation 2018/1046.

- other changes require an amendment or simplified approval, if specifically provided for in Article 6.2
- flexibility caps: not applicable.

ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS AND CONTRIBUTIONS

In order to be eligible, costs and contributions must meet the **eligibility** conditions set out in this Article.

6.1 General eligibility conditions

The **general eligibility conditions** are the following:

- (a) for actual costs:
 - (i) they must be actually incurred by the beneficiary
 - (ii) they must be incurred in the period set out in Article 4 (with the exception of costs relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21)
 - (iii) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (iv) they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation
 - (v) they must be identifiable and verifiable, in particular recorded in the beneficiary's accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary's usual cost accounting practices
 - (vi) they must comply with the applicable national law on taxes, labour and social security and
 - (vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency
- (b) for unit costs or contributions (if any):
 - (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (ii) the units must:
 - be actually used or produced by the beneficiary in the period set out in Article 4 (with the exception of units relating to the submission of the final periodic report, which may be used or produced afterwards; see Article 21)
 - be necessary for the implementation of the action and
 - (iii) the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 20)

- (c) for flat-rate costs or contributions (if any):
- (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (ii) the costs or contributions to which the flat-rate is applied must:
 - be eligible
 - relate to the period set out in Article 4 (with the exception of costs or contributions relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21)
- (d) for lump sum costs or contributions (if any):
- (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (ii) the work must be properly implemented by the beneficiary in accordance with Annex 1
 - (iii) the deliverables/outputs must be achieved in the period set out in Article 4 (with the exception of deliverables/outputs relating to the submission of the final periodic report, which may be achieved afterwards; see Article 21)
- (e) for unit, flat-rate or lump sum costs or contributions according to usual cost accounting practices (if any):
- (i) they must fulfil the general eligibility conditions for the type of cost concerned
 - (ii) the cost accounting practices must be applied in a consistent manner, based on objective criteria, regardless of the source of funding
- (f) for financing not linked to costs (if any): the results must be achieved or the conditions must be fulfilled as described in Annex 1.

In addition, for direct cost categories (e.g. personnel, travel & subsistence, subcontracting and other direct costs) only costs that are directly linked to the action implementation and can therefore be attributed to it directly are eligible. They must not include any indirect costs (i.e. costs that are only indirectly linked to the action, e.g. via cost drivers).

6.2 Specific eligibility conditions for each budget category

For each budget category, the **specific eligibility conditions** are as follows:

Direct costs

A. Personnel costs

A.1 Costs for employees (or equivalent) are eligible as personnel costs if they fulfil the general eligibility conditions and are related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action.

They must be limited to salaries, social security contributions, taxes and other costs linked to the

remuneration, if they arise from national law or the employment contract (or equivalent appointing act) and be calculated on the basis of the costs actually incurred, in accordance with the following method:

{daily rate for the person
multiplied by
number of day-equivalents worked on the action (rounded up or down to the nearest half-day)}.

The daily rate must be calculated as:

{annual personnel costs for the person
divided by
215}.

The number of day-equivalents declared for a person must be identifiable and verifiable (see Article 20).

The total number of day-equivalents declared in EU grants, for a person for a year, cannot be higher than 215.

The personnel costs may also include supplementary payments for personnel assigned to the action (including payments on the basis of supplementary contracts regardless of their nature), if:

- it is part of the beneficiary's usual remuneration practices and is paid in a consistent manner whenever the same kind of work or expertise is required
- the criteria used to calculate the supplementary payments are objective and generally applied by the beneficiary, regardless of the source of funding used.

A.2 and A.3 Costs for natural persons working under a direct contract other than an employment contract and costs for **seconded persons by a third party against payment** are also eligible as personnel costs, if they are assigned to the action, fulfil the general eligibility conditions and:

- (a) work under conditions similar to those of an employee (in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed) and
- (b) the result of the work belongs to the beneficiary (unless agreed otherwise).

They must be calculated on the basis of a rate which corresponds to the costs actually incurred for the direct contract or secondment and must not be significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

A.4 The work of SME owners for the action (i.e. owners of beneficiaries that are small and medium-sized enterprises¹⁰ not receiving a salary) or **natural person beneficiaries** (i.e. beneficiaries that are

¹⁰ For the definition, see Commission Recommendation 2003/361/EC: micro, small or medium-sized enterprise (SME) are enterprises

- engaged in an economic activity, irrespective of their legal form (including, in particular, self-employed persons and family businesses engaged in craft or other activities, and partnerships or associations regularly engaged in an economic activity) and

natural persons not receiving a salary) may be declared as personnel costs, if they fulfil the general eligibility conditions and are calculated as unit costs in accordance with the method set out in Annex 2a.

A.5 The work of **volunteers** for the action (i.e. persons who freely work for an organisation, on a non-compulsory basis and without being paid) may be declared as personnel costs, if and as declared eligible in the call conditions, if they fulfil the general eligibility conditions and are calculated as unit costs in accordance with the method set out in Annex 2a.

They:

- may not exceed the maximum amount for volunteers for the action (which corresponds to 50% of the total (ineligible and eligible) project costs and contributions estimated in the proposal)
- may not exceed the maximum amount for volunteers for each beneficiary set out in Annex 2
- may not make the maximum EU contribution to costs higher than the total eligible costs without volunteers.

If also indirect costs for volunteers are declared eligible in the call conditions, the amount of indirect costs may be added to the volunteers costs category in Annex 2, at the flat-rate set out in Point E.

B. Subcontracting costs

Subcontracting costs for the action (including related duties, taxes and charges, such as non-deductible or non-refundable value added tax (VAT)) are eligible, if they are calculated on the basis of the costs actually incurred, fulfil the general eligibility conditions and are awarded using the beneficiary's usual purchasing practices — provided these ensure subcontracts with best value for money (or if appropriate the lowest price) and that there is no conflict of interests (see Article 12).

Beneficiaries that are 'contracting authorities/entities' within the meaning of the EU Directives on public procurement must also comply with the applicable national law on public procurement.

Subcontracting may cover only a limited part of the action.

The tasks to be subcontracted and the estimated cost for each subcontract must be set out in Annex 1 and the total estimated costs of subcontracting per beneficiary must be set out in Annex 2 (or may be approved ex post in the periodic report, if the use of subcontracting does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants; 'simplified approval procedure').

C. Purchase costs

Purchase costs for the action (including related duties, taxes and charges, such as non-deductible or non-refundable value added tax (VAT)) are eligible if they fulfil the general eligibility conditions and are bought using the beneficiary's usual purchasing practices — provided these ensure purchases with

-
- employing fewer than 250 persons (expressed in 'annual working units' as defined in Article 5 of the Recommendation) and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.

best value for money (or if appropriate the lowest price) and that there is no conflict of interests (see Article 12).

Beneficiaries that are ‘contracting authorities/entities’ within the meaning of the EU Directives on public procurement must also comply with the applicable national law on public procurement.

C.1 Travel and subsistence

Purchases for **travel, accommodation and subsistence** must be calculated as follows:

- travel: on the basis of the costs actually incurred and in line with the beneficiary’s usual practices on travel
- accommodation: on the basis of the costs actually incurred and in line with the beneficiary’s usual practices on travel
- subsistence: on the basis of the costs actually incurred and in line with the beneficiary’s usual practices on travel .

C.2 Equipment

Purchases of **equipment, infrastructure or other assets** specifically for the action (or developed as part of the action tasks) may be declared as full capitalised costs if they fulfil the eligibility conditions applicable to their respective cost categories.

‘Capitalised costs’ means:

- costs incurred in the purchase or for the development of the equipment, infrastructure or other assets and,
- which are recorded under a fixed asset account of the beneficiary in compliance with international accounting standards and the beneficiary’s usual cost accounting practices.

If such equipment, infrastructure or other assets are rented or leased, full costs for **renting or leasing** are eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees.

C.3 Other goods, works and services

Purchases of **other goods, works and services** must be calculated on the basis of the costs actually incurred.

Such goods, works and services include, for instance, consumables and supplies, promotion, dissemination, protection of results, translations, publications, certificates and financial guarantees, if required under the Agreement.

D. Other cost categories

D.1 Financial support to third parties

Costs for providing financial support to third parties (in the form of **grants, prizes** or similar forms of support; if any) are eligible, if and as declared eligible in the call conditions, if they fulfil the

general eligibility conditions, are calculated on the basis of the costs actually incurred and the support is implemented in accordance with the conditions set out in Annex 1.

These conditions must ensure objective and transparent selection procedures and include at least the following:

- (a) for grants (or similar):
 - (i) the maximum amount of financial support for each third party ('recipient'); this amount may not exceed the amount set out in the Data Sheet (see Point 3) or otherwise agreed with the granting authority
 - (ii) the criteria for calculating the exact amount of the financial support
 - (iii) the different types of activity that qualify for financial support, on the basis of a closed list
 - (iv) the persons or categories of persons that will be supported and
 - (v) the criteria and procedures for giving financial support
- (b) for prizes (or similar):
 - (i) the eligibility and award criteria
 - (ii) the amount of the prize and
 - (iii) the payment arrangements.

D.2 Land purchase

Costs for land purchase from private entities (or long-term lease of land or one-off compensations for land use rights) are eligible, if and as declared eligible in the call conditions, if they fulfil the general eligibility conditions, are calculated on the basis of the costs actually incurred and:

- (a) the purchase will contribute to improving, maintaining and restoring the integrity of the Natura 2000 network set up pursuant to Article 3 of Directive 92/43/EEC, including through improving connectivity by the creation of corridors, stepping stones, or other elements of green infrastructure
- (b) land purchase is the only or most cost-effective way of achieving the desired conservation outcome
- (c) the land purchased is reserved in the long term for uses consistent with the specific objectives of the LIFE Programme
- (d) the Member State concerned ensures, by way of transfer or otherwise, the long-term assignment of such land to nature conservation purposes and the beneficiary documents this by ensuring that:
 - (i) the entry into the land register includes a condition that the land will be assigned definitively to nature conservation
 - (ii) or, if there is no land register or such a condition is not possible under national law, that

such a condition is either included in the land sale contract or guaranteed by equivalent means

- (e) for land purchases by private entity beneficiaries: the beneficiaries ensure the long-term conservation by ensuring that:
 - (i) the entry into the land register includes a condition that, in case of their dissolution or incapacity to manage the land according to nature conservation requirements, the property will be transferred to an entity primarily active in the field of nature protection
 - (ii) or, if there is no land register or such a condition is not possible under national law, that such a condition is either included in the land sale contract or guaranteed by equivalent means
- (f) for purchases of partial rights: the entry into the land register duly reflects the long-term nature conservation objectives and the requirements set out in this Article
- (g) for land purchased to be exchanged at a later date for another parcel on which the action will be undertaken: the exchange is carried out before the end of the action and the land exchanged complies with the requirements set out in this Article
- (h) for long-term leases: the lease is of at least 20 years and includes provisions and commitments that ensure the achievement of its objectives in terms of habitat and species protection.

This cost will not be taken into account for the indirect cost flat-rate.

Indirect costs

E. Indirect costs

Indirect costs will be reimbursed at the flat-rate of 7% of the eligible direct costs (categories A-D, except volunteers costs and exempted specific cost categories, if any).

Contributions

Not applicable

6.3 Ineligible costs and contributions

The following costs or contributions are **ineligible**:

- (a) costs or contributions that do not comply with the conditions set out above (Article 6.1 and 6.2), in particular:
 - (i) costs related to return on capital and dividends paid by a beneficiary
 - (ii) debt and debt service charges
 - (iii) provisions for future losses or debts
 - (iv) interest owed
 - (v) currency exchange losses

- (vi) bank costs charged by the beneficiary's bank for transfers from the granting authority
 - (vii) excessive or reckless expenditure
 - (viii) deductible or refundable VAT (including VAT paid by public bodies acting as public authority)
 - (ix) costs incurred or contributions for activities implemented during grant agreement suspension (see Article 31)
 - (x) in-kind contributions by third parties
- (b) costs or contributions declared under other EU grants (or grants awarded by an EU Member State, non-EU country or other body implementing the EU budget), except for the following cases:
- (i) Synergy actions: not applicable
 - (ii) if the action grant is combined with an operating grant¹¹ running during the same period and the beneficiary can demonstrate that the operating grant does not cover any (direct or indirect) costs of the action grant
- (c) costs or contributions for staff of a national (or regional/local) administration, for activities that are part of the administration's normal activities (i.e. not undertaken only because of the grant)
- (d) costs or contributions (especially travel and subsistence) for staff or representatives of EU institutions, bodies or agencies
- (e) other :
- (i) country restrictions for eligible costs: not applicable
 - (ii) costs or contributions declared specifically ineligible in the call conditions.

6.4 Consequences of non-compliance

If a beneficiary declares costs or contributions that are ineligible, they will be rejected (see Article 27).

This may also lead to other measures described in Chapter 5.

CHAPTER 4 GRANT IMPLEMENTATION

SECTION 1 CONSORTIUM: BENEFICIARIES, AFFILIATED ENTITIES AND OTHER PARTICIPANTS

ARTICLE 7 — BENEFICIARIES

¹¹ For the definition, see Article 180(2)(b) of EU Financial Regulation 2018/1046: ‘**operating grant**’ means an EU grant to finance “the functioning of a body which has an objective forming part of and supporting an EU policy”.

The beneficiaries, as signatories of the Agreement, are fully responsible towards the granting authority for implementing it and for complying with all its obligations.

They must implement the Agreement to their best abilities, in good faith and in accordance with all the obligations and terms and conditions it sets out.

They must have the appropriate resources to implement the action and implement the action under their own responsibility and in accordance with Article 11. If they rely on affiliated entities or other participants (see Articles 8 and 9), they retain sole responsibility towards the granting authority and the other beneficiaries.

They are jointly responsible for the *technical* implementation of the action. If one of the beneficiaries fails to implement their part of the action, the other beneficiaries must ensure that this part is implemented by someone else (without being entitled to an increase of the maximum grant amount and subject to an amendment; see Article 39). The *financial* responsibility of each beneficiary in case of recoveries is governed by Article 22.

The beneficiaries (and their action) must remain eligible under the EU programme funding the grant for the entire duration of the action. Costs and contributions will be eligible only as long as the beneficiary and the action are eligible.

The **internal roles and responsibilities** of the beneficiaries are divided as follows:

(a) Each beneficiary must:

- (i) keep information stored in the Portal Participant Register up to date (see Article 19)
- (ii) inform the granting authority (and the other beneficiaries) immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 19)
- (iii) submit to the coordinator in good time:
 - the prefinancing guarantees (if required; see Article 23)
 - the financial statements and certificates on the financial statements (CFS) (if required; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
 - the contribution to the deliverables and technical reports (see Article 21)
 - any other documents or information required by the granting authority under the Agreement
- (iv) submit via the Portal data and information related to the participation of their affiliated entities.

(b) The coordinator must:

- (i) monitor that the action is implemented properly (see Article 11)
- (ii) act as the intermediary for all communications between the consortium and the granting authority, unless the Agreement or granting authority specifies otherwise, and in particular:

- submit the prefinancing guarantees to the granting authority (if any)
 - request and review any documents or information required and verify their quality and completeness before passing them on to the granting authority
 - submit the deliverables and reports to the granting authority
 - inform the granting authority about the payments made to the other beneficiaries (report on the distribution of payments; if required, see Articles 22 and 32)
- (iii) distribute the payments received from the granting authority to the other beneficiaries without unjustified delay (see Article 22).

The coordinator may not delegate or subcontract the above-mentioned tasks to any other beneficiary or third party (including affiliated entities).

However, coordinators which are public bodies may delegate the tasks set out in Point (b)(ii) last indent and (iii) above to entities with ‘authorisation to administer’ which they have created or which are controlled by or affiliated to them. In this case, the coordinator retains sole responsibility for the payments and for compliance with the obligations under the Agreement.

Moreover, coordinators which are ‘sole beneficiaries’¹² (or similar, such as European research infrastructure consortia (ERICs)) may delegate the tasks set out in Point (b)(i) to (iii) above to one of their members. The coordinator retains sole responsibility for compliance with the obligations under the Agreement.

The beneficiaries must have **internal arrangements** regarding their operation and co-ordination, to ensure that the action is implemented properly.

If required by the granting authority (see Data Sheet, Point 1), these arrangements must be set out in a written **consortium agreement** between the beneficiaries, covering for instance:

- the internal organisation of the consortium
- the management of access to the Portal
- different distribution keys for the payments and financial responsibilities in case of recoveries (if any)
- additional rules on rights and obligations related to background and results (see Article 16)
- settlement of internal disputes
- liability, indemnification and confidentiality arrangements between the beneficiaries.

The internal arrangements must not contain any provision contrary to this Agreement.

ARTICLE 8 — AFFILIATED ENTITIES

¹² For the definition, see Article 187(2) EU Financial Regulation 2018/1046: “Where several entities satisfy the criteria for being awarded a grant and together form one entity, that entity may be treated as the **sole beneficiary**, including where it is specifically established for the purpose of implementing the action financed by the grant.”

The following entities which are linked to a beneficiary will participate in the action as ‘affiliated entities’:

- **LEGAMBIENTE LOMBARDIA ONLUS (Legamb Lomb)**, PIC 935375657, linked to LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE)
- **LEGAMBIENTE VENETO ASSOCIAZIONE DI PROMOZIONE SOCIALE (Legamb Veneto)**, PIC 896190373, linked to LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE)
- **LEGAMBIENTE PIEMONTE E VALLE D'AOSTA ONLUS (LEGAMB PVDA)**, PIC 929074246, linked to LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE)
- **LEGAMBIENTE EMILIA-ROMAGNA (LEGAMB ER)**, PIC 925869657, linked to LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE)

Affiliated entities can charge costs and contributions to the action under the same conditions as the beneficiaries and must implement the action tasks attributed to them in Annex 1 in accordance with Article 11.

Their costs and contributions will be included in Annex 2 and will be taken into account for the calculation of the grant.

The beneficiaries must ensure that all their obligations under this Agreement also apply to their affiliated entities.

The beneficiaries must ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the affiliated entities.

Breaches by affiliated entities will be handled in the same manner as breaches by beneficiaries. Recovery of undue amounts will be handled through the beneficiaries.

If the granting authority requires joint and several liability of affiliated entities (see Data Sheet, Point 4.4), they must sign the declaration set out in Annex 3a and may be held liable in case of enforced recoveries against their beneficiaries (see Article 22.2 and 22.4).

ARTICLE 9 — OTHER PARTICIPANTS INVOLVED IN THE ACTION

9.1 Associated partners

Not applicable

9.2 Third parties giving in-kind contributions to the action

Other third parties may give in-kind contributions to the action (i.e. personnel, equipment, other goods, works and services, etc. which are free-of-charge), if necessary for the implementation.

Third parties giving in-kind contributions do not implement any action tasks. They may not charge costs or contributions to the action and the costs for the in-kind contributions are not eligible.

The third parties and their in-kind contributions should be set out in Annex 1.

9.3 Subcontractors

Subcontractors may participate in the action, if necessary for the implementation.

Subcontractors must implement their action tasks in accordance with Article 11. The costs for the subcontracted tasks (invoiced price from the subcontractor) are eligible and may be charged by the beneficiaries, under the conditions set out in Article 6. The costs will be included in Annex 2 as part of the beneficiaries' costs.

The beneficiaries must ensure that their contractual obligations under Articles 11 (proper implementation), 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping) also apply to the subcontractors.

The beneficiaries must ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the subcontractors.

9.4 Recipients of financial support to third parties

If the action includes providing financial support to third parties (e.g. grants, prizes or similar forms of support), the beneficiaries must ensure that their contractual obligations under Articles 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping) also apply to the third parties receiving the support (recipients).

The beneficiaries must also ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the recipients.

ARTICLE 10 — PARTICIPANTS WITH SPECIAL STATUS

10.1 Non-EU participants

Participants which are established in a non-EU country (if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)
- for the submission of certificates under Article 24: to use qualified external auditors which are independent and comply with comparable standards as those set out in EU Directive 2006/43/EC¹³
- for the controls under Article 25: to allow for checks, reviews, audits and investigations (including on-the-spot checks, visits and inspections) by the bodies mentioned in that Article (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.).

Special rules on dispute settlement apply (see Data Sheet, Point 5).

¹³ Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts or similar national regulations (OJ L 157, 9.6.2006, p. 87).

10.2 Participants which are international organisations

Participants which are international organisations (IOs; if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)
- for the submission of certificates under Article 24: to use either independent public officers or external auditors which comply with comparable standards as those set out in EU Directive 2006/43/EC
- for the controls under Article 25: to allow for the checks, reviews, audits and investigations by the bodies mentioned in that Article, taking into account the specific agreements concluded by them and the EU (if any).

For such participants, nothing in the Agreement will be interpreted as a waiver of their privileges or immunities, as accorded by their constituent documents or international law.

Special rules on applicable law and dispute settlement apply (see Article 43 and Data Sheet, Point 5).

10.3 Pillar-assessed participants

Pillar-assessed participants (if any) may rely on their own systems, rules and procedures, in so far as they have been positively assessed and do not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries.

‘Pillar-assessment’ means a review by the European Commission on the systems, rules and procedures which participants use for managing EU grants (in particular internal control system, accounting system, external audits, financing of third parties, rules on recovery and exclusion, information on recipients and protection of personal data; see Article 154 EU Financial Regulation 2018/1046).

Participants with a positive pillar assessment may rely on their own systems, rules and procedures, in particular for:

- record-keeping (Article 20): may be done in accordance with internal standards, rules and procedures
- currency conversion for financial statements (Article 21): may be done in accordance with usual accounting practices
- guarantees (Article 23): for public law bodies, prefinancing guarantees are not needed
- certificates (Article 24):
 - certificates on the financial statements (CFS): may be provided by their regular internal or external auditors and in accordance with their internal financial regulations and procedures
 - certificates on usual accounting practices (CoMUC): are not needed if those practices are covered by an ex-ante assessment

and use the following specific rules, for:

- recoveries (Article 22): in case of financial support to third parties, there will be no recovery if the participant has done everything possible to retrieve the undue amounts from the third party receiving the support (including legal proceedings) and non-recovery is not due to an error or negligence on its part
- checks, reviews, audits and investigations by the EU (Article 25): will be conducted taking into account the rules and procedures specifically agreed between them and the framework agreement (if any)
- impact evaluation (Article 26): will be conducted in accordance with the participant's internal rules and procedures and the framework agreement (if any)
- grant agreement suspension (Article 31): certain costs incurred during grant suspension are eligible (notably, minimum costs necessary for a possible resumption of the action and costs relating to contracts which were entered into before the pre-information letter was received and which could not reasonably be suspended, reallocated or terminated on legal grounds)
- grant agreement termination (Article 32): the final grant amount and final payment will be calculated taking into account also costs relating to contracts due for execution only after termination takes effect, if the contract was entered into before the pre-information letter was received and could not reasonably be terminated on legal grounds
- liability for damages (Article 33.2): the granting authority must be compensated for damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement only if the damage is due to an infringement of the participant's internal rules and procedures or due to a violation of third parties' rights by the participant or one of its employees or individual for whom the employees are responsible.

Participants whose pillar assessment covers procurement and granting procedures may also do purchases, subcontracting and financial support to third parties (Article 6.2) in accordance with their internal rules and procedures for purchases, subcontracting and financial support.

Participants whose pillar assessment covers data protection rules may rely on their internal standards, rules and procedures for data protection (Article 15).

The participants may however not rely on provisions which would breach the principle of equal treatment of applicants or beneficiaries or call into question the decision awarding the grant, such as in particular:

- eligibility (Article 6)
- consortium roles and set-up (Articles 7-9)
- security and ethics (Articles 13, 14)
- IPR (including background and results, access rights and rights of use), communication, dissemination and visibility (Articles 16 and 17)
- information obligation (Article 19)

- payment, reporting and amendments (Articles 21, 22 and 39)
- rejections, reductions, suspensions and terminations (Articles 27, 28, 29-32)

If the pillar assessment was subject to remedial measures, reliance on the internal systems, rules and procedures is subject to compliance with those remedial measures.

Participants whose assessment has not yet been updated to cover (the new rules on) data protection may rely on their internal systems, rules and procedures, provided that they ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subject
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the personal data.

Participants must inform the coordinator without delay of any changes to the systems, rules and procedures that were part of the pillar assessment. The coordinator must immediately inform the granting authority.

Pillar-assessed participants that have also concluded a framework agreement with the EU, may moreover — under the same conditions as those above (i.e. not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries) — rely on the provisions set out in that framework agreement.

SECTION 2 RULES FOR CARRYING OUT THE ACTION

ARTICLE 11 — PROPER IMPLEMENTATION OF THE ACTION

11.1 Obligation to properly implement the action

The beneficiaries must implement the action as described in Annex 1 and in compliance with the provisions of the Agreement, the call conditions and all legal obligations under applicable EU, international and national law.

11.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 12 — CONFLICT OF INTERESTS

12.1 Conflict of interests

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the Agreement could be compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other direct or indirect interest ('conflict of interests').

They must formally notify the granting authority without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The granting authority may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

12.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28) and the grant or the beneficiary may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 13 — CONFIDENTIALITY AND SECURITY

13.1 Sensitive information

The parties must keep confidential any data, documents or other material (in any form) that is identified as sensitive in writing ('sensitive information') — during the implementation of the action and for at least until the time-limit set out in the Data Sheet (see Point 6).

If a beneficiary requests, the granting authority may agree to keep such information confidential for a longer period.

Unless otherwise agreed between the parties, they may use sensitive information only to implement the Agreement.

The beneficiaries may disclose sensitive information to their personnel or other participants involved in the action only if they:

- (a) need to know it in order to implement the Agreement and
- (b) are bound by an obligation of confidentiality.

The granting authority may disclose sensitive information to its staff and to other EU institutions and bodies.

It may moreover disclose sensitive information to third parties, if:

- (a) this is necessary to implement the Agreement or safeguard the EU financial interests and
- (b) the recipients of the information are bound by an obligation of confidentiality.

The confidentiality obligations no longer apply if:

- (a) the disclosing party agrees to release the other party
- (b) the information becomes publicly available, without breaching any confidentiality obligation
- (c) the disclosure of the sensitive information is required by EU, international or national law.

Specific confidentiality rules (if any) are set out in Annex 5.

13.2 Classified information

The parties must handle classified information in accordance with the applicable EU, international or national law on classified information (in particular, Decision 2015/444¹⁴ and its implementing rules).

Deliverables which contain classified information must be submitted according to special procedures agreed with the granting authority.

Action tasks involving classified information may be subcontracted only after explicit approval (in writing) from the granting authority.

Classified information may not be disclosed to any third party (including participants involved in the action implementation) without prior explicit written approval from the granting authority.

Specific security rules (if any) are set out in Annex 5.

13.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 14 — ETHICS AND VALUES

14.1 Ethics

The action must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles.

Specific ethics rules (if any) are set out in Annex 5.

14.2 Values

The beneficiaries must commit to and ensure the respect of basic EU values (such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities).

Specific rules on values (if any) are set out in Annex 5.

¹⁴ Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

14.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 15 — DATA PROTECTION

15.1 Data processing by the granting authority

Any personal data under the Agreement will be processed under the responsibility of the data controller of the granting authority in accordance with and for the purposes set out in the Portal Privacy Statement.

For grants where the granting authority is the European Commission, an EU regulatory or executive agency, joint undertaking or other EU body, the processing will be subject to Regulation 2018/1725¹⁵.

15.2 Data processing by the beneficiaries

The beneficiaries must process personal data under the Agreement in compliance with the applicable EU, international and national law on data protection (in particular, Regulation 2016/679¹⁶).

They must ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subjects
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the data.

The beneficiaries may grant their personnel access to personal data only if it is strictly necessary for implementing, managing and monitoring the Agreement. The beneficiaries must ensure that the personnel is under a confidentiality obligation.

¹⁵ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

¹⁶ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC ('GDPR') (OJ L 119, 4.5.2016, p. 1).

The beneficiaries must inform the persons whose data are transferred to the granting authority and provide them with the Portal Privacy Statement.

15.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 16 — INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE

16.1 Background and access rights to background

The beneficiaries must give each other and the other participants access to the background identified as needed for implementing the action, subject to any specific rules in Annex 5.

‘Background’ means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that is:

- (a) held by the beneficiaries before they acceded to the Agreement and
- (b) needed to implement the action or exploit the results.

If background is subject to rights of a third party, the beneficiary concerned must ensure that it is able to comply with its obligations under the Agreement.

16.2 Ownership of results

The granting authority does not obtain ownership of the results produced under the action.

‘Results’ means any tangible or intangible effect of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.

16.3 Rights of use of the granting authority on materials, documents and information received for policy, information, communication, dissemination and publicity purposes

The granting authority has the right to use non-sensitive information relating to the action and materials and documents received from the beneficiaries (notably summaries for publication, deliverables, as well as any other material, such as pictures or audio-visual material, in paper or electronic form) for policy, information, communication, dissemination and publicity purposes — during the action or afterwards.

The right to use the beneficiaries’ materials, documents and information is granted in the form of a royalty-free, non-exclusive and irrevocable licence, which includes the following rights:

- (a) **use for its own purposes** (in particular, making them available to persons working for the granting authority or any other EU service (including institutions, bodies, offices, agencies, etc.) or EU Member State institution or body; copying or reproducing them in whole or in part, in unlimited numbers; and communication through press information services)

- (b) **distribution to the public** (in particular, publication as hard copies and in electronic or digital format, publication on the internet, as a downloadable or non-downloadable file, broadcasting by any channel, public display or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes)
- (c) **editing or redrafting** (including shortening, summarising, inserting other elements (e.g. meta-data, legends, other graphic, visual, audio or text elements), extracting parts (e.g. audio or video files), dividing into parts, use in a compilation)
- (d) **translation**
- (e) **storage** in paper, electronic or other form
- (f) **archiving**, in line with applicable document-management rules
- (g) the right to authorise **third parties** to act on its behalf or sub-license to third parties the modes of use set out in Points (b), (c), (d) and (f), if needed for the information, communication and publicity activity of the granting authority
- (h) **processing**, analysing, aggregating the materials, documents and information received and **producing derivative works**.

The rights of use are granted for the whole duration of the industrial or intellectual property rights concerned.

If materials or documents are subject to moral rights or third party rights (including intellectual property rights or rights of natural persons on their image and voice), the beneficiaries must ensure that they comply with their obligations under this Agreement (in particular, by obtaining the necessary licences and authorisations from the rights holders concerned).

Where applicable, the granting authority will insert the following information:

“© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the [name of granting authority] under conditions.”

16.4 Specific rules on IPR, results and background

Specific rules regarding intellectual property rights, results and background (if any) are set out in Annex 5.

16.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

ARTICLE 17 — COMMUNICATION, DISSEMINATION AND VISIBILITY

17.1 Communication — Dissemination — Promoting the action

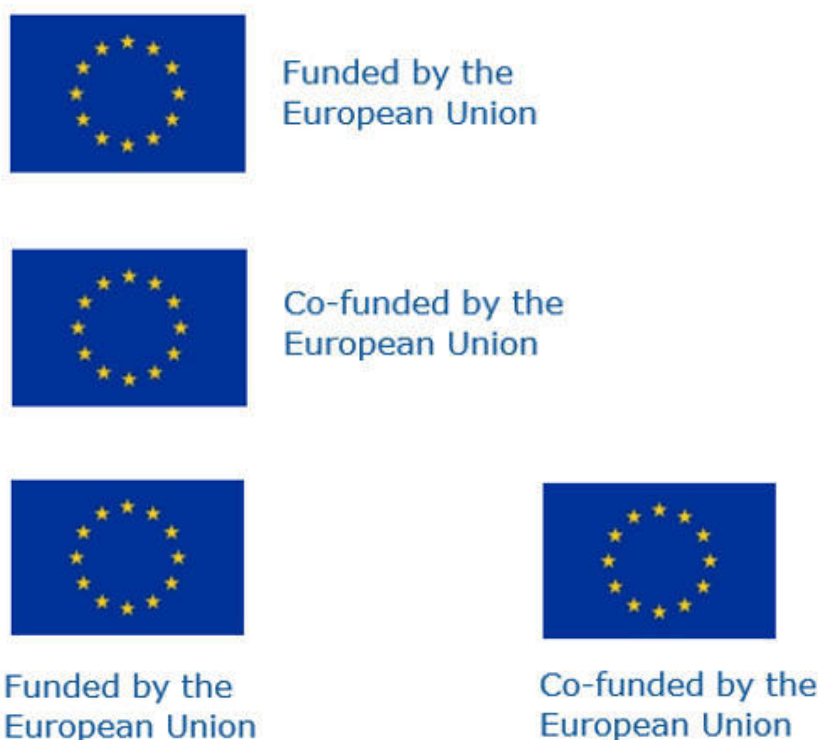
Unless otherwise agreed with the granting authority, the beneficiaries must promote the action and its

results by providing targeted information to multiple audiences (including the media and the public), in accordance with Annex 1 and in a strategic, coherent and effective manner.

Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the granting authority.

17.2 Visibility — European flag and funding statement

Unless otherwise agreed with the granting authority, communication activities of the beneficiaries related to the action (including media relations, conferences, seminars, information material, such as brochures, leaflets, posters, presentations, etc., in electronic form, via traditional or social media, etc.), dissemination activities and any infrastructure, equipment, vehicles, supplies or major result funded by the grant must acknowledge EU support and display the European flag (emblem) and funding statement (translated into local languages, where appropriate):



The emblem must remain distinct and separate and cannot be modified by adding other visual marks, brands or text.

Apart from the emblem, no other visual identity or logo may be used to highlight the EU support.

When displayed in association with other logos (e.g. of beneficiaries or sponsors), the emblem must be displayed at least as prominently and visibly as the other logos.

For the purposes of their obligations under this Article, the beneficiaries may use the emblem without first obtaining approval from the granting authority. This does not, however, give them the right to exclusive use. Moreover, they may not appropriate the emblem or any similar trademark or logo, either by registration or by any other means.

17.3 Quality of information — Disclaimer

Any communication or dissemination activity related to the action must use factually accurate information.

Moreover, it must indicate the following disclaimer (translated into local languages where appropriate):

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.”

17.4 Specific communication, dissemination and visibility rules

Specific communication, dissemination and visibility rules (if any) are set out in Annex 5.

17.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 18 — SPECIFIC RULES FOR CARRYING OUT THE ACTION

18.1 Specific rules for carrying out the action

Specific rules for implementing the action (if any) are set out in Annex 5.

18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

SECTION 3 GRANT ADMINISTRATION

ARTICLE 19 — GENERAL INFORMATION OBLIGATIONS

19.1 Information requests

The beneficiaries must provide — during the action or afterwards and in accordance with Article 7 — any information requested in order to verify eligibility of the costs or contributions declared, proper implementation of the action and compliance with the other obligations under the Agreement.

The information provided must be accurate, precise and complete and in the format requested, including electronic format.

19.2 Participant Register data updates

The beneficiaries must keep — at all times, during the action or afterwards — their information stored

in the Portal Participant Register up to date, in particular, their name, address, legal representatives, legal form and organisation type.

19.3 Information about events and circumstances which impact the action

The beneficiaries must immediately inform the granting authority (and the other beneficiaries) of any of the following:

- (a) **events** which are likely to affect or delay the implementation of the action or affect the EU's financial interests, in particular:
 - (i) changes in their legal, financial, technical, organisational or ownership situation (including changes linked to one of the exclusion grounds listed in the declaration of honour signed before grant signature)
 - (ii) linked action information: not applicable
- (b) **circumstances** affecting:
 - (i) the decision to award the grant or
 - (ii) compliance with requirements under the Agreement.

19.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 20 — RECORD-KEEPING

20.1 Keeping records and supporting documents

The beneficiaries must — at least until the time-limit set out in the Data Sheet (see Point 6) — keep records and other supporting documents to prove the proper implementation of the action in line with the accepted standards in the respective field (if any).

In addition, the beneficiaries must — for the same period — keep the following to justify the amounts declared:

- (a) for actual costs: adequate records and supporting documents to prove the costs declared (such as contracts, subcontracts, invoices and accounting records); in addition, the beneficiaries' usual accounting and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documents
- (b) for flat-rate costs and contributions (if any): adequate records and supporting documents to prove the eligibility of the costs or contributions to which the flat-rate is applied
- (c) for the following simplified costs and contributions: the beneficiaries do not need to keep specific records on the actual costs incurred, but must keep:

- (i) for unit costs and contributions (if any): adequate records and supporting documents to prove the number of units declared
 - (ii) for lump sum costs and contributions (if any): adequate records and supporting documents to prove proper implementation of the work as described in Annex 1
 - (iii) for financing not linked to costs (if any): adequate records and supporting documents to prove the achievement of the results or the fulfilment of the conditions as described in Annex 1
- (d) for unit, flat-rate and lump sum costs and contributions according to usual cost accounting practices (if any): the beneficiaries must keep any adequate records and supporting documents to prove that their cost accounting practices have been applied in a consistent manner, based on objective criteria, regardless of the source of funding, and that they comply with the eligibility conditions set out in Articles 6.1 and 6.2.

Moreover, the following is needed for specific budget categories:

- (e) for personnel costs: time worked for the beneficiary under the action must be supported by declarations signed monthly by the person and their supervisor, unless another reliable time-record system is in place; the granting authority may accept alternative evidence supporting the time worked for the action declared, if it considers that it offers an adequate level of assurance
- (f) additional record-keeping rules: not applicable

The records and supporting documents must be made available upon request (see Article 19) or in the context of checks, reviews, audits or investigations (see Article 25).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Article 25), the beneficiaries must keep these records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered originals if they are authorised by the applicable national law. The granting authority may accept non-original documents if they offer a comparable level of assurance.

20.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs or contributions insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 21 — REPORTING

21.1 Continuous reporting

The beneficiaries must continuously report on the progress of the action (e.g. **deliverables, milestones, outputs/outcomes, critical risks, indicators**, etc; if any), in the Portal Continuous

Reporting tool and in accordance with the timing and conditions it sets out (as agreed with the granting authority).

Standardised deliverables (e.g. progress reports not linked to payments, reports on cumulative expenditure, special reports, etc; if any) must be submitted using the templates published on the Portal.

21.2 Periodic reporting: Technical reports and financial statements

In addition, the beneficiaries must provide reports to request payments, in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2):

- for additional prefinancings (if any): an **additional prefinancing report**
- for interim payments (if any) and the final payment: a **periodic report**.

The prefinancing and periodic reports include a technical and financial part.

The technical part includes an overview of the action implementation. It must be prepared using the template available in the Portal Periodic Reporting tool.

The financial part of the additional prefinancing report includes a statement on the use of the previous prefinancing payment.

The financial part of the periodic report includes:

- the financial statements (individual and consolidated; for all beneficiaries/affiliated entities)
- the explanation on the use of resources (or detailed cost reporting table, if required)
- the certificates on the financial statements (CFS) (if required; see Article 24.2 and Data Sheet, Point 4.3).

The **financial statements** must detail the eligible costs and contributions for each budget category and, for the final payment, also the revenues for the action (see Articles 6 and 22).

All eligible costs and contributions incurred should be declared, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts that are not declared in the individual financial statements will not be taken into account by the granting authority.

By signing the financial statements (directly in the Portal Periodic Reporting tool), the beneficiaries confirm that:

- the information provided is complete, reliable and true
- the costs and contributions declared are eligible (see Article 6)
- the costs and contributions can be substantiated by adequate records and supporting documents (see Article 20) that will be produced upon request (see Article 19) or in the context of checks, reviews, audits and investigations (see Article 25)
- for the final periodic report: all the revenues have been declared (if required; see Article 22).

Beneficiaries will have to submit also the financial statements of their affiliated entities (if any). In case

of recoveries (see Article 22), beneficiaries will be held responsible also for the financial statements of their affiliated entities.

21.3 Currency for financial statements and conversion into euros

The financial statements must be drafted in euro.

Beneficiaries with general accounts established in a currency other than the euro must convert the costs recorded in their accounts into euro, at the average of the daily exchange rates published in the C series of the *Official Journal of the European Union* (ECB website), calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the *Official Journal* for the currency in question, they must be converted at the average of the monthly accounting exchange rates published on the European Commission website (InforEuro), calculated over the corresponding reporting period.

Beneficiaries with general accounts in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

21.4 Reporting language

The reporting must be in the language of the Agreement, unless otherwise agreed with the granting authority (see Data Sheet, Point 4.2).

21.5 Consequences of non-compliance

If a report submitted does not comply with this Article, the granting authority may suspend the payment deadline (see Article 29) and apply other measures described in Chapter 5.

If the coordinator breaches its reporting obligations, the granting authority may terminate the grant or the coordinator's participation (see Article 32) or apply other measures described in Chapter 5.

ARTICLE 22 — PAYMENTS AND RECOVERIES — CALCULATION OF AMOUNTS DUE

22.1 Payments and payment arrangements

Payments will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

They will be made in euro to the bank account indicated by the coordinator (see Data Sheet, Point 4.2) and must be distributed without unjustified delay (restrictions may apply to distribution of the initial prefinancing payment; see Data Sheet, Point 4.2).

Payments to this bank account will discharge the granting authority from its payment obligation.

The cost of payment transfers will be borne as follows:

- the granting authority bears the cost of transfers charged by its bank
- the beneficiary bears the cost of transfers charged by its bank

- the party causing a repetition of a transfer bears all costs of the repeated transfer.

Payments by the granting authority will be considered to have been carried out on the date when they are debited to its account.

22.2 Recoveries

Recoveries will be made, if — at beneficiary termination, final payment or afterwards — it turns out that the granting authority has paid too much and needs to recover the amounts undue.

The general liability regime for recoveries (first-line liability) is as follows: At final payment, the coordinator will be fully liable for recoveries, even if it has not been the final recipient of the undue amounts. At beneficiary termination or after final payment, recoveries will be made directly against the beneficiaries concerned.

Beneficiaries will be fully liable for repaying the debts of their affiliated entities.

In case of enforced recoveries (see Article 22.4):

- the beneficiaries will be jointly and severally liable for repaying debts of another beneficiary under the Agreement (including late-payment interest), if required by the granting authority (see Data Sheet, Point 4.4)
- affiliated entities will be held liable for repaying debts of their beneficiaries under the Agreement (including late-payment interest), if required by the granting authority (see Data Sheet, Point 4.4).

22.3 Amounts due

22.3.1 Prefinancing payments

The aim of the prefinancing is to provide the beneficiaries with a float.

It remains the property of the EU until the final payment.

For **initial prefinancings** (if any), the amount due, schedule and modalities are set out in the Data Sheet (see Point 4.2).

For **additional prefinancings** (if any), the amount due, schedule and modalities are also set out in the Data Sheet (see Point 4.2). However, if the statement on the use of the previous prefinancing payment shows that less than 70% was used, the amount set out in the Data Sheet will be reduced by the difference between the 70% threshold and the amount used.

Prefinancing payments (or parts of them) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

22.3.2 Amount due at beneficiary termination — Recovery

In case of beneficiary termination, the granting authority will determine the provisional amount due for the beneficiary concerned. Payments (if any) will be made with the next interim or final payment.

The **amount due** will be calculated in the following step:

Step 1 — Calculation of the total accepted EU contribution

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the ‘accepted EU contribution’ for the beneficiary for all reporting periods, by calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the accepted costs of the beneficiary), taking into account requests for a lower contribution to costs and CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the ‘total accepted EU contribution’ for the beneficiary.

The **balance** is then calculated by deducting the payments received (if any; see report on the distribution of payments in Article 32), from the total accepted EU contribution:

$$\left\{ \begin{array}{l} \text{total accepted EU contribution for the beneficiary} \\ \text{minus} \\ \text{prefinancing and interim payments received (if any)} \end{array} \right\}.$$

If the balance is **positive**, the amount will be included in the next interim or final payment to the consortium.

If the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount due, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered and ask this amount to be paid to the coordinator (**confirmation letter**).

The amounts will later on also be taken into account for the next interim or final payment.

22.3.3 Interim payments

Interim payments reimburse the eligible costs and contributions claimed for the implementation of the action during the reporting periods (if any).

Interim payments (if any) will be made in accordance with the schedule and modalities set out the Data Sheet (see Point 4.2).

Payment is subject to the approval of the periodic report. Its approval does not imply recognition of compliance, authenticity, completeness or correctness of its content.

The **interim payment** will be calculated by the granting authority in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the interim payment ceiling

Step 1 — Calculation of the total accepted EU contribution

The granting authority will calculate the ‘accepted EU contribution’ for the action for the reporting period, by first calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the accepted costs of each beneficiary), taking into account requests for a lower contribution to costs, and CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions from beneficiary termination (if any). The resulting amount is the ‘total accepted EU contribution’.

Step 2 — Limit to the interim payment ceiling

The resulting amount is then capped to ensure that the total amount of prefinancing and interim payments (if any) does not exceed the interim payment ceiling set out in the Data Sheet (see Point 4.2).

Interim payments (or parts of them) may be offset (without the beneficiaries’ consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

22.3.4 Final payment — Final grant amount — Revenues and Profit — Recovery

The final payment (payment of the balance) reimburses the remaining part of the eligible costs and contributions claimed for the implementation of the action (if any).

The final payment will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

Payment is subject to the approval of the final periodic report. Its approval does not imply recognition of compliance, authenticity, completeness or correctness of its content.

The **final grant amount for the action** will be calculated in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the maximum grant amount

Step 3 — Reduction due to the no-profit rule

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the ‘accepted EU contribution’ for the action for all reporting periods, by calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the total accepted costs of each beneficiary), taking into account requests for a lower contribution to costs, CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the ‘total accepted EU contribution’.

Step 2 — Limit to the maximum grant amount

If the resulting amount is higher than the maximum grant amount set out in Article 5.2, it will be limited to the latter.

Step 3 — Reduction due to the no-profit rule

If the no-profit rule is provided for in the Data Sheet (see Point 4.2), the grant must not produce a profit (i.e. surplus of the amount obtained following Step 2 plus the action’s revenues, over the eligible costs and contributions approved by the granting authority).

‘Revenue’ is all income generated by the action, during its duration (see Article 4), for beneficiaries that are profit legal entities.

If there is a profit, it will be deducted in proportion to the final rate of reimbursement of the eligible costs approved by the granting authority (as compared to the amount calculated following Steps 1 and 2 minus the contributions).

The **balance** (final payment) is then calculated by deducting the total amount of prefinancing and interim payments already made (if any), from the final grant amount:

$$\begin{aligned} & \{ \text{final grant amount} \\ & \text{minus} \\ & \{ \text{prefinancing and interim payments made (if any)} \} \} \end{aligned}$$

If the balance is **positive**, it will be **paid** to the coordinator.

The final payment (or part of it) may be offset (without the beneficiaries’ consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

If the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to recover, the final grant amount, the amount to be recovered and the reasons why
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered (**confirmation letter**), together with a **debit note** with the terms and date for payment.

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

22.3.5 Audit implementation after final payment — Revised final grant amount — Recovery

If — after the final payment (in particular, after checks, reviews, audits or investigations; see Article 25) — the granting authority rejects costs or contributions (see Article 27) or reduces the grant (see Article 28), it will calculate the **revised final grant amount** for the beneficiary concerned.

The **beneficiary revised final grant amount** will be calculated in the following step:

Step 1 — Calculation of the revised total accepted EU contribution

Step 1 — Calculation of the revised total accepted EU contribution

The granting authority will first calculate the ‘revised accepted EU contribution’ for the beneficiary, by calculating the ‘revised accepted costs’ and ‘revised accepted contributions’.

After that, it will take into account grant reductions (if any). The resulting ‘revised total accepted EU contribution’ is the beneficiary revised final grant amount.

If the revised final grant amount is lower than the beneficiary’s final grant amount (i.e. its share in the final grant amount for the action), it will be **recovered** in accordance with the following procedure:

The **beneficiary final grant amount** (i.e. share in the final grant amount for the action) is calculated as follows:

$$\left\{ \begin{array}{l} \text{total accepted EU contribution for the beneficiary} \\ \text{divided by} \\ \text{total accepted EU contribution for the action} \end{array} \right\} \times \left\{ \begin{array}{l} \text{final grant amount for the action} \end{array} \right\}.$$

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered (**confirmation letter**), together with a **debit note** with the terms and the date for payment.

Recoveries against affiliated entities (if any) will be handled through their beneficiaries.

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

22.4 Enforced recovery

If payment is not made by the date specified in the debit note, the amount due will be recovered:

- (a) by offsetting the amount — without the coordinator or beneficiary's consent — against any amounts owed to the coordinator or beneficiary by the granting authority.

In exceptional circumstances, to safeguard the EU financial interests, the amount may be offset before the payment date specified in the debit note.

For grants where the granting authority is the European Commission or an EU executive agency, debts may also be offset against amounts owed by other Commission services or executive agencies.

- (b) by drawing on the financial guarantee(s) (if any)
- (c) by holding other beneficiaries jointly and severally liable (if any; see Data Sheet, Point 4.4)
- (d) by holding affiliated entities jointly and severally liable (if any, see Data Sheet, Point 4.4)
- (e) by taking legal action (see Article 43) or, provided that the granting authority is the European Commission or an EU executive agency, by adopting an enforceable decision under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 100(2) of EU Financial Regulation 2018/1046.

The amount to be recovered will be increased by **late-payment interest** at the rate set out in Article 22.5, from the day following the payment date in the debit note, up to and including the date the full payment is received.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2015/2366¹⁷ applies.

For grants where the granting authority is an EU executive agency, enforced recovery by offsetting or enforceable decision will be done by the services of the European Commission (see also Article 43).

22.5 Consequences of non-compliance

22.5.1 If the granting authority does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the rate applied by the European Central Bank (ECB) for its main refinancing operations in euros ('reference rate'), plus the rate specified in the

¹⁷ Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (OJ L 337, 23.12.2015, p. 35).

Data Sheet (Point 4.2). The reference rate is the rate in force on the first day of the month in which the payment deadline expires, as published in the C series of the *Official Journal of the European Union*.

If the late-payment interest is lower than or equal to EUR 200, it will be paid to the coordinator only on request submitted within two months of receiving the late payment.

Late-payment interest is not due if all beneficiaries are EU Member States (including regional and local government authorities or other public bodies acting on behalf of a Member State for the purpose of this Agreement).

If payments or the payment deadline are suspended (see Articles 29 and 30), payment will not be considered as late.

Late-payment interest covers the period running from the day following the due date for payment (see above), up to and including the date of payment.

Late-payment interest is not considered for the purposes of calculating the final grant amount.

22.5.2 If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 29) and the grant or the coordinator may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 23 — GUARANTEES

23.1 Prefinancing guarantee

If required by the granting authority (see Data Sheet, Point 4.2), the beneficiaries must provide (one or more) prefinancing guarantee(s) in accordance with the timing and the amounts set out in the Data Sheet.

The coordinator must submit them to the granting authority in due time before the prefinancing they are linked to.

The guarantees must be drawn up using the template published on the Portal and fulfil the following conditions:

- (a) be provided by a bank or approved financial institution established in the EU or — if requested by the coordinator and accepted by the granting authority — by a third party or a bank or financial institution established outside the EU offering equivalent security
- (b) the guarantor stands as first-call guarantor and does not require the granting authority to first have recourse against the principal debtor (i.e. the beneficiary concerned) and
- (c) remain explicitly in force until the final payment and, if the final payment takes the form of a recovery, until five months after the debit note is notified to a beneficiary.

They will be released within the following month.

23.2 Consequences of non-compliance

If the beneficiaries breach their obligation to provide the prefinancing guarantee, the prefinancing will not be paid.

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 24 — CERTIFICATES

24.1 Operational verification report (OVR)

Not applicable

24.2 Certificate on the financial statements (CFS)

If required by the granting authority (see Data Sheet, Point 4.3), the beneficiaries must provide certificates on their financial statements (CFS), in accordance with the schedule, threshold and conditions set out in the Data Sheet.

The coordinator must submit them as part of the periodic report (see Article 21).

The certificates must be drawn up using the template published on the Portal, cover the costs declared on the basis of actual costs and costs according to usual cost accounting practices (if any), and fulfil the following conditions:

- (a) be provided by a qualified approved external auditor which is independent and complies with Directive 2006/43/EC¹⁸ (or for public bodies: by a competent independent public officer)
- (b) the verification must be carried out according to the highest professional standards to ensure that the financial statements comply with the provisions under the Agreement and that the costs declared are eligible.

The certificates will not affect the granting authority's right to carry out its own checks, reviews or audits, nor preclude the European Court of Auditors (ECA), the European Public Prosecutor's Office (EPPO) or the European Anti-Fraud Office (OLAF) from using their prerogatives for audits and investigations under the Agreement (see Article 25).

If the costs (or a part of them) were already audited by the granting authority, these costs do not need to be covered by the certificate and will not be counted for calculating the threshold (if any).

24.3 Certificate on the compliance of usual cost accounting practices (CoMUC)

Not applicable

24.4 Systems and process audit (SPA)

Not applicable

24.5 Consequences of non-compliance

¹⁸ Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts or similar national regulations (OJ L 157, 9.6.2006, p. 87).

If a beneficiary does not submit a certificate on the financial statements (CFS) or the certificate is rejected, the accepted EU contribution to costs will be capped to reflect the CFS threshold.

If a beneficiary breaches any of its other obligations under this Article, the granting authority may apply the measures described in Chapter 5.

ARTICLE 25 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS

25.1 Granting authority checks, reviews and audits

25.1.1 Internal checks

The granting authority may — during the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing costs and contributions, deliverables and reports.

25.1.2 Project reviews

The granting authority may carry out reviews on the proper implementation of the action and compliance with the obligations under the Agreement (general project reviews or specific issues reviews).

Such project reviews may be started during the implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiary concerned and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent, outside experts. If it uses outside experts, the coordinator or beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The coordinator or beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted (including information on the use of resources). The granting authority may request beneficiaries to provide such information to it directly. Sensitive information and documents will be treated in accordance with Article 13.

The coordinator or beneficiary concerned may be requested to participate in meetings, including with the outside experts.

For **on-the-spot visits**, the beneficiary concerned must allow access to sites and premises (including to the outside experts) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the review findings, a **project review report** will be drawn up.

The granting authority will formally notify the project review report to the coordinator or beneficiary concerned, which has 30 days from receiving notification to make observations.

Project reviews (including project review reports) will be in the language of the Agreement.

25.1.3 Audits

The granting authority may carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Such audits may be started during the implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the beneficiary concerned and will be considered to start on the date of the notification.

The granting authority may use its own audit service, delegate audits to a centralised service or use external audit firms. If it uses an external firm, the beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. Sensitive information and documents will be treated in accordance with Article 13.

For **on-the-spot** visits, the beneficiary concerned must allow access to sites and premises (including for the external audit firm) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the audit findings, a **draft audit report** will be drawn up.

The auditors will formally notify the draft audit report to the beneficiary concerned, which has 30 days from receiving notification to make observations (contradictory audit procedure).

The **final audit report** will take into account observations by the beneficiary concerned and will be formally notified to them.

Audits (including audit reports) will be in the language of the Agreement.

25.2 European Commission checks, reviews and audits in grants of other granting authorities

Where the granting authority is not the European Commission, the latter has the same rights of checks, reviews and audits as the granting authority.

25.3 Access to records for assessing simplified forms of funding

The beneficiaries must give the European Commission access to their statutory records for the periodic assessment of simplified forms of funding which are used in EU programmes.

25.4 OLAF, EPPO and ECA audits and investigations

The following bodies may also carry out checks, reviews, audits and investigations — during the action or afterwards:

- the European Anti-Fraud Office (OLAF) under Regulations No 883/2013¹⁹ and No 2185/96²⁰
- the European Public Prosecutor's Office (EPPO) under Regulation 2017/1939
- the European Court of Auditors (ECA) under Article 287 of the Treaty on the Functioning of the EU (TFEU) and Article 257 of EU Financial Regulation 2018/1046.

If requested by these bodies, the beneficiary concerned must provide full, accurate and complete information in the format requested (including complete accounts, individual salary statements or other personal data, including in electronic format) and allow access to sites and premises for on-the-spot visits or inspections — as provided for under these Regulations.

To this end, the beneficiary concerned must keep all relevant information relating to the action, at least until the time-limit set out in the Data Sheet (Point 6) and, in any case, until any ongoing checks, reviews, audits, investigations, litigation or other pursuits of claims have been concluded.

25.5 Consequences of checks, reviews, audits and investigations — Extension of results of reviews, audits or investigations

25.5.1 Consequences of checks, reviews, audits and investigations in this grant

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to rejections (see Article 27), grant reduction (see Article 28) or other measures described in Chapter 5.

Rejections or grant reductions after the final payment will lead to a revised final grant amount (see Article 22).

Findings in checks, reviews, audits or investigations during the action implementation may lead to a request for amendment (see Article 39), to change the description of the action set out in Annex 1.

Checks, reviews, audits or investigations that find systemic or recurrent errors, irregularities, fraud or breach of obligations in any EU grant may also lead to consequences in other EU grants awarded under similar conditions ('extension to other grants').

Moreover, findings arising from an OLAF or EPPO investigation may lead to criminal prosecution under national law.

25.5.2 Extension from other grants

Results of checks, reviews, audits or investigations in other grants may be extended to this grant, if:

- (a) the beneficiary concerned is found, in other EU grants awarded under similar conditions, to have committed systemic or recurrent errors, irregularities, fraud or breach of obligations that have a material impact on this grant and

¹⁹ Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18/09/2013, p. 1).

²⁰ Council Regulation (Euratom, EC) No 2185/1996 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15/11/1996, p. 2).

- (b) those findings are formally notified to the beneficiary concerned — together with the list of grants affected by the findings — within the time-limit for audits set out in the Data Sheet (see Point 6).

The granting authority will formally notify the beneficiary concerned of the intention to extend the findings and the list of grants affected.

If the extension concerns **rejections of costs or contributions**: the notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings
- (b) the request to submit revised financial statements for all grants affected
- (c) the correction rate for extrapolation, established on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected, if the beneficiary concerned:
 - (i) considers that the submission of revised financial statements is not possible or practicable or
 - (ii) does not submit revised financial statements.

If the extension concerns **grant reductions**: the notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings and
- (b) the **correction rate for extrapolation**, established on the basis of the systemic or recurrent errors and the principle of proportionality.

The beneficiary concerned has **60 days** from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method/rate**.

On the basis of this, the granting authority will analyse the impact and decide on the implementation (i.e. start rejection or grant reduction procedures, either on the basis of the revised financial statements or the announced/alternative method/rate or a mix of those; see Articles 27 and 28).

25.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs or contributions insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 26 — IMPACT EVALUATIONS

26.1 Impact evaluation

The granting authority may carry out impact evaluations of the action, measured against the objectives and indicators of the EU programme funding the grant.

Such evaluations may be started during implementation of the action and until the time-limit set out

in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiaries and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent outside experts.

The coordinator or beneficiaries must provide any information relevant to evaluate the impact of the action, including information in electronic format.

26.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the granting authority may apply the measures described in Chapter 5.

CHAPTER 5 CONSEQUENCES OF NON-COMPLIANCE

SECTION 1 REJECTIONS AND GRANT REDUCTION

ARTICLE 27 — REJECTION OF COSTS AND CONTRIBUTIONS

27.1 Conditions

The granting authority will — at beneficiary termination, interim payment, final payment or afterwards — reject any costs or contributions which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 25).

The rejection may also be based on the extension of findings from other grants to this grant (see Article 25).

Ineligible costs or contributions will be rejected.

27.2 Procedure

If the rejection does not lead to a recovery, the granting authority will formally notify the coordinator or beneficiary concerned of the rejection, the amounts and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the rejection (payment review procedure).

If the rejection leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

27.3 Effects

If the granting authority rejects costs or contributions, it will deduct them from the costs or contributions declared and then calculate the amount due (and, if needed, make a recovery; see Article 22).

ARTICLE 28 — GRANT REDUCTION

28.1 Conditions

The granting authority may — at beneficiary termination, final payment or afterwards — reduce the grant for a beneficiary, if:

- (a) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (see Article 25).

The amount of the reduction will be calculated for each beneficiary concerned and proportionate to the seriousness and the duration of the errors, irregularities or fraud or breach of obligations, by applying an individual reduction rate to their accepted EU contribution.

28.2 Procedure

If the grant reduction does not lead to a recovery, the granting authority will formally notify the coordinator or beneficiary concerned of the reduction, the amount to be reduced and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the reduction (payment review procedure).

If the grant reduction leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

28.3 Effects

If the granting authority reduces the grant, it will deduct the reduction and then calculate the amount due (and, if needed, make a recovery; see Article 22).

SECTION 2 SUSPENSION AND TERMINATION

ARTICLE 29 — PAYMENT DEADLINE SUSPENSION

29.1 Conditions

The granting authority may — at any moment — suspend the payment deadline if a payment cannot be processed because:

- (a) the required report (see Article 21) has not been submitted or is not complete or additional information is needed
- (b) there are doubts about the amount to be paid (e.g. ongoing audit extension procedure, queries

about eligibility, need for a grant reduction, etc.) and additional checks, reviews, audits or investigations are necessary, or

- (c) there are other issues affecting the EU financial interests.

29.2 Procedure

The granting authority will formally notify the coordinator of the suspension and the reasons why.

The suspension will **take effect** the day the notification is sent.

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining time to pay (see Data Sheet, Point 4.2) will resume.

If the suspension exceeds two months, the coordinator may request the granting authority to confirm if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the report and the revised report is not submitted (or was submitted but is also rejected), the granting authority may also terminate the grant or the participation of the coordinator (see Article 32).

ARTICLE 30 — PAYMENT SUSPENSION

30.1 Conditions

The granting authority may — at any moment — suspend payments, in whole or in part for one or more beneficiaries, if:

- (a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant.

If payments are suspended for one or more beneficiaries, the granting authority will make partial payment(s) for the part(s) not suspended. If suspension concerns the final payment, the payment (or recovery) of the remaining amount after suspension is lifted will be considered to be the payment that closes the action.

30.2 Procedure

Before suspending payments, the granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to suspend payments and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

At the end of the suspension procedure, the granting authority will also inform the coordinator.

The suspension will **take effect** the day after the confirmation notification is sent.

If the conditions for resuming payments are met, the suspension will be **lifted**. The granting authority will formally notify the beneficiary concerned (and the coordinator) and set the suspension end date.

During the suspension, no prefinancing will be paid to the beneficiaries concerned. For interim payments, the periodic reports for all reporting periods except the last one (see Article 21) must not contain any financial statements from the beneficiary concerned (or its affiliated entities). The coordinator must include them in the next periodic report after the suspension is lifted or — if suspension is not lifted before the end of the action — in the last periodic report.

ARTICLE 31 — GRANT AGREEMENT SUSPENSION

31.1 Consortium-requested GA suspension

31.1.1 Conditions and procedure

The beneficiaries may request the suspension of the grant or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 35) — make implementation impossible or excessively difficult.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the suspension takes effect; this date may be before the date of the submission of the amendment request and
- the expected date of resumption.

The suspension will **take effect** on the day specified in the amendment.

Once circumstances allow for implementation to resume, the coordinator must immediately request another **amendment** of the Agreement to set the suspension end date, the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the amendment. This date may be before the date of the submission of the amendment request.

During the suspension, no prefinancing will be paid. Costs incurred or contributions for activities implemented during grant suspension are not eligible (see Article 6.3).

31.2 EU-initiated GA suspension

31.2.1 Conditions

The granting authority may suspend the grant or any part of it, if:

- (a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant
- (c) other:
 - (i) linked action issues: not applicable
 - (ii) additional GA suspension grounds: not applicable.

31.2.2 Procedure

Before suspending the grant, the granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to suspend the grant and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

The suspension will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification).

Once the conditions for resuming implementation of the action are met, the granting authority will formally notify the coordinator a **lifting of suspension letter**, in which it will set the suspension end date and invite the coordinator to request an amendment of the Agreement to set the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see

Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the lifting of suspension letter. This date may be before the date on which the letter is sent.

During the suspension, no prefinancing will be paid. Costs incurred or contributions for activities implemented during suspension are not eligible (see Article 6.3).

The beneficiaries may not claim damages due to suspension by the granting authority (see Article 33).

Grant suspension does not affect the granting authority's right to terminate the grant or a beneficiary (see Article 32) or reduce the grant (see Article 28).

ARTICLE 32 — GRANT AGREEMENT OR BENEFICIARY TERMINATION

32.1 Consortium-requested GA termination

32.1.1 Conditions and procedure

The beneficiaries may request the termination of the grant.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the consortium ends work on the action ('end of work date') and
- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

The termination will **take effect** on the termination date specified in the amendment.

If no reasons are given or if the granting authority considers the reasons do not justify termination, it may consider the grant terminated improperly.

32.1.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before the end of work date (see Article 22). Costs relating to contracts due for execution only after the end of work are not eligible.

If the granting authority does not receive the report within the deadline, only costs and contributions which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

Improper termination may lead to a grant reduction (see Article 28).

After termination, the beneficiaries' obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

32.2 Consortium-requested beneficiary termination

32.2.1 Conditions and procedure

The coordinator may request the termination of the participation of one or more beneficiaries, on request of the beneficiary concerned or on behalf of the other beneficiaries.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing)
- the date the beneficiary ends work on the action ('end of work date')
- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

If the termination concerns the coordinator and is done without its agreement, the amendment request must be submitted by another beneficiary (acting on behalf of the consortium).

The termination will **take effect** on the termination date specified in the amendment.

If no information is given or if the granting authority considers that the reasons do not justify termination, it may consider the beneficiary to have been terminated improperly.

32.2.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a **report on the distribution of payments** to the beneficiary concerned
- (ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, the financial statement, the explanation on the use of resources, and, if applicable, the certificate on the financial statement (CFS; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
- (iii) a second **request for amendment** (see Article 39) with other amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before the end of work date (see Article 22). Costs relating to contracts due for execution only after the end of work are not eligible.

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 21).

If the granting authority does not receive the termination report within the deadline, only costs and contributions which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the second request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the second request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

Improper termination may lead to a reduction of the grant (see Article 31) or grant termination (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

32.3 EU-initiated GA or beneficiary termination

32.3.1 Conditions

The granting authority may terminate the grant or the participation of one or more beneficiaries, if:

- (a) one or more beneficiaries do not accede to the Agreement (see Article 40)
- (b) a change to the action or the legal, financial, technical, organisational or ownership situation of a beneficiary is likely to substantially affect the implementation of the action or calls into question the decision to award the grant (including changes linked to one of the exclusion grounds listed in the declaration of honour)
- (c) following termination of one or more beneficiaries, the necessary changes to the Agreement (and their impact on the action) would call into question the decision awarding the grant or breach the principle of equal treatment of applicants
- (d) implementation of the action has become impossible or the changes necessary for its continuation would call into question the decision awarding the grant or breach the principle of equal treatment of applicants
- (e) a beneficiary (or person with unlimited liability for its debts) is subject to bankruptcy proceedings or similar (including insolvency, winding-up, administration by a liquidator or court, arrangement with creditors, suspension of business activities, etc.)
- (f) a beneficiary (or person with unlimited liability for its debts) is in breach of social security or tax obligations
- (g) a beneficiary (or person having powers of representation, decision-making or control, or person

essential for the award/implementation of the grant) has been found guilty of grave professional misconduct

- (h) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed fraud, corruption, or is involved in a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking
- (i) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) was created under a different jurisdiction with the intent to circumvent fiscal, social or other legal obligations in the country of origin (or created another entity with this purpose)
- (j) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.)
- (k) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings from other grants to this grant; see Article 25)
- (l) despite a specific request by the granting authority, a beneficiary does not request — through the coordinator — an amendment to the Agreement to end the participation of one of its affiliated entities or associated partners that is in one of the situations under points (d), (f), (e), (g), (h), (i) or (j) and to reallocate its tasks, or
- (m) other:
 - (i) linked action issues: not applicable
 - (ii) additional GA termination grounds: not applicable.

32.3.2 Procedure

Before terminating the grant or participation of one or more beneficiaries, the granting authority will send a **pre-information letter** to the coordinator or beneficiary concerned:

- formally notifying the intention to terminate and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the termination and the date it will take effect (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

For beneficiary terminations, the granting authority will — at the end of the procedure — also inform the coordinator.

The termination will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification; ‘termination date’).

32.3.3 Effects

(a) for **GA termination**:

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the last open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before termination takes effect (see Article 22). Costs relating to contracts due for execution only after termination are not eligible.

If the grant is terminated for breach of the obligation to submit reports, the coordinator may not submit any report after termination.

If the granting authority does not receive the report within the deadline, only costs and contributions which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

Termination does not affect the granting authority’s right to reduce the grant (see Article 28) or to impose administrative sanctions (see Article 34).

The beneficiaries may not claim damages due to termination by the granting authority (see Article 33).

After termination, the beneficiaries’ obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

(b) for **beneficiary termination**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a **report on the distribution of payments** to the beneficiary concerned
- (ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, the financial statement, the explanation on the use of resources, and, if applicable, the certificate on the financial statement (CFS; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
- (iii) a **request for amendment** (see Article 39) with any amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the

report submitted and taking into account the costs incurred and contributions for activities implemented before termination takes effect (see Article 22). Costs relating to contracts due for execution only after termination are not eligible.

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 21).

If the granting authority does not receive the termination report within the deadline, only costs and contributions included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

SECTION 3 OTHER CONSEQUENCES: DAMAGES AND ADMINISTRATIVE SANCTIONS

ARTICLE 33 — DAMAGES

33.1 Liability of the granting authority

The granting authority cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of the implementation of the Agreement, including for gross negligence.

The granting authority cannot be held liable for any damage caused by any of the beneficiaries or other participants involved in the action, as a consequence of the implementation of the Agreement.

33.2 Liability of the beneficiaries

The beneficiaries must compensate the granting authority for any damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement, provided that it was caused by gross negligence or wilful act.

The liability does not extend to indirect or consequential losses or similar damage (such as loss of

profit, loss of revenue or loss of contracts), provided such damage was not caused by wilful act or by a breach of confidentiality.

ARTICLE 34 — ADMINISTRATIVE SANCTIONS AND OTHER MEASURES

Nothing in this Agreement may be construed as preventing the adoption of administrative sanctions (i.e. exclusion from EU award procedures and/or financial penalties) or other public law measures, in addition or as an alternative to the contractual measures provided under this Agreement (see, for instance, Articles 135 to 145 EU Financial Regulation 2018/1046 and Articles 4 and 7 of Regulation 2988/95²¹).

SECTION 4 FORCE MAJEURE

ARTICLE 35 — FORCE MAJEURE

A party prevented by force majeure from fulfilling its obligations under the Agreement cannot be considered in breach of them.

‘Force majeure’ means any situation or event that:

- prevents either party from fulfilling their obligations under the Agreement,
- was unforeseeable, exceptional situation and beyond the parties’ control,
- was not due to error or negligence on their part (or on the part of other participants involved in the action), and
- proves to be inevitable in spite of exercising all due diligence.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible.

CHAPTER 6 FINAL PROVISIONS

ARTICLE 36 — COMMUNICATION BETWEEN THE PARTIES

36.1 Forms and means of communication — Electronic management

EU grants are managed fully electronically through the EU Funding & Tenders Portal (‘Portal’).

All communications must be made electronically through the Portal, in accordance with the Portal Terms and Conditions and using the forms and templates provided there (except if explicitly instructed otherwise by the granting authority).

²¹ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

Communications must be made in writing and clearly identify the grant agreement (project number and acronym).

Communications must be made by persons authorised according to the Portal Terms and Conditions. For naming the authorised persons, each beneficiary must have designated — before the signature of this Agreement — a ‘legal entity appointed representative (LEAR)’. The role and tasks of the LEAR are stipulated in their appointment letter (see Portal Terms and Conditions).

If the electronic exchange system is temporarily unavailable, instructions will be given on the Portal.

36.2 Date of communication

The sending date for communications made through the Portal will be the date and time of sending, as indicated by the time logs.

The receiving date for communications made through the Portal will be the date and time the communication is accessed, as indicated by the time logs. Formal notifications that have not been accessed within 10 days after sending, will be considered to have been accessed (see Portal Terms and Conditions).

If a communication is exceptionally made on paper (by e-mail or postal service), general principles apply (i.e. date of sending/receipt). Formal notifications by registered post with proof of delivery will be considered to have been received either on the delivery date registered by the postal service or the deadline for collection at the post office.

If the electronic exchange system is temporarily unavailable, the sending party cannot be considered in breach of its obligation to send a communication within a specified deadline.

36.3 Addresses for communication

The Portal can be accessed via the Europa website.

The address for paper communications to the granting authority (if exceptionally allowed) is the official mailing address indicated on its website.

For beneficiaries, it is the legal address specified in the Portal Participant Register.

ARTICLE 37 — INTERPRETATION OF THE AGREEMENT

The provisions in the Data Sheet take precedence over the rest of the Terms and Conditions of the Agreement.

Annex 5 takes precedence over the Terms and Conditions; the Terms and Conditions take precedence over the Annexes other than Annex 5.

Annex 2 takes precedence over Annex 1.

ARTICLE 38 — CALCULATION OF PERIODS AND DEADLINES

In accordance with Regulation No 1182/71²², periods expressed in days, months or years are calculated from the moment the triggering event occurs.

The day during which that event occurs is not considered as falling within the period.

‘Days’ means calendar days, not working days.

ARTICLE 39 — AMENDMENTS

39.1 Conditions

The Agreement may be amended, unless the amendment entails changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Amendments may be requested by any of the parties.

39.2 Procedure

The party requesting an amendment must submit a request for amendment signed directly in the Portal Amendment tool.

The coordinator submits and receives requests for amendment on behalf of the beneficiaries (see Annex 3). If a change of coordinator is requested without its agreement, the submission must be done by another beneficiary (acting on behalf of the other beneficiaries).

The request for amendment must include:

- the reasons why
- the appropriate supporting documents and
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The granting authority may request additional information.

If the party receiving the request agrees, it must sign the amendment in the tool within 45 days of receiving notification (or any additional information the granting authority has requested). If it does not agree, it must formally notify its disagreement within the same deadline. The deadline may be extended, if necessary for the assessment of the request. If no notification is received within the deadline, the request is considered to have been rejected.

An amendment **enters into force** on the day of the signature of the receiving party.

An amendment **takes effect** on the date of entry into force or other date specified in the amendment.

ARTICLE 40 — ACCESSION AND ADDITION OF NEW BENEFICIARIES

²² Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time-limits (OJ L 124, 8/6/1971, p. 1).

40.1 Accession of the beneficiaries mentioned in the Preamble

The beneficiaries which are not coordinator must accede to the grant by signing the accession form (see Annex 3) directly in the Portal Grant Preparation tool, within 30 days after the entry into force of the Agreement (see Article 44).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 44).

If a beneficiary does not accede to the grant within the above deadline, the coordinator must — within 30 days — request an amendment (see Article 39) to terminate the beneficiary and make any changes necessary to ensure proper implementation of the action. This does not affect the granting authority's right to terminate the grant (see Article 32).

40.2 Addition of new beneficiaries

In justified cases, the beneficiaries may request the addition of a new beneficiary.

For this purpose, the coordinator must submit a request for amendment in accordance with Article 39. It must include an accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool.

New beneficiaries will assume the rights and obligations under the Agreement with effect from the date of their accession specified in the accession form (see Annex 3).

Additions are also possible in mono-beneficiary grants.

ARTICLE 41 — TRANSFER OF THE AGREEMENT

In justified cases, the beneficiary of a mono-beneficiary grant may request the transfer of the grant to a new beneficiary, provided that this would not call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiary must submit a request for **amendment** (see Article 39), with

- the reasons why
- the accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool and
- additional supporting documents (if required by the granting authority).

The new beneficiary will assume the rights and obligations under the Agreement with effect from the date of accession specified in the accession form (see Annex 3).

ARTICLE 42 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE GRANTING AUTHORITY

The beneficiaries may not assign any of their claims for payment against the granting authority to any third party, except if expressly approved in writing by the granting authority on the basis of a reasoned, written request by the coordinator (on behalf of the beneficiary concerned).

If the granting authority has not accepted the assignment or if the terms of it are not observed, the assignment will have no effect on it.

In no circumstances will an assignment release the beneficiaries from their obligations towards the granting authority.

ARTICLE 43 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES

43.1 Applicable law

The Agreement is governed by the applicable EU law, supplemented if necessary by the law of Belgium.

Special rules may apply for beneficiaries which are international organisations (if any; see Data Sheet, Point 5).

43.2 Dispute settlement

If a dispute concerns the interpretation, application or validity of the Agreement, the parties must bring action before the EU General Court — or, on appeal, the EU Court of Justice — under Article 272 of the Treaty on the Functioning of the EU (TFEU).

For non-EU beneficiaries (if any), such disputes must be brought before the courts of Brussels, Belgium — unless an international agreement provides for the enforceability of EU court judgements.

For beneficiaries with arbitration as special dispute settlement forum (if any; see Data Sheet, Point 5), the dispute will — in the absence of an amicable settlement — be settled in accordance with the Rules for Arbitration published on the Portal.

If a dispute concerns administrative sanctions, offsetting or an enforceable decision under Article 299 TFEU (see Articles 22 and 34), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice — under Article 263 TFEU.

For grants where the granting authority is an EU executive agency (see Preamble), actions against offsetting and enforceable decisions must be brought against the European Commission (not against the granting authority; see also Article 22).

ARTICLE 44 — ENTRY INTO FORCE

The Agreement will enter into force on the day of signature by the granting authority or the coordinator, depending on which is later.

SIGNATURES

For the coordinator

For the granting authority



ANNEX 1



**Programme for Environment
and Climate Action (LIFE)**

Description of the action (DoA)

Part A

Part B

DESCRIPTION OF THE ACTION (PART A)

COVER PAGE

Part A of the Description of the Action (DoA) must be completed directly on the Portal Grant Preparation screens.

| PROJECT | |
|---|--|
| <i>Grant Preparation (General Information screen) — Enter the info.</i> | |
| Project number: | 101069928 |
| Project name: | CLIMate Adaptation for the PO river basin district |
| Project acronym: | LIFE21-IPC-IT-LIFE CLIMAX PO |
| Call: | LIFE-2021-STRAT-two-stage |
| Topic: | LIFE-2021-STRAT-CLIMA-SIP-two-stage |
| Type of action: | LIFE-PJG |
| Service: | CINEA/D/01 |
| Project starting date: | fixed date: 1 February 2023 |
| Project duration: | 108 months |

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| List of participants | 3 |
| List of work packages | 5 |
| Staff effort | 54 |
| List of deliverables | 57 |
| List of milestones (outputs/outcomes) | 88 |
| List of critical risks | 91 |

PROJECT SUMMARY

Project summary

Grant Preparation (General Information screen) — Provide an overall description of your project (including context and overall objectives, planned activities and main achievements, and expected results and impacts (on target groups, change procedures, capacities, innovation etc)). This summary should give readers a clear idea of what your project is about.

Use the project summary from your proposal.

Climate change is leading to great environmental challenges, which require compelling and urgent actions, especially in Southern Europe and the Mediterranean area.

The Italian National Adaptation Strategy (NAS) recognises the Po River Basin District as the national special case and pilot area for climate adaptation in the water management sector.

CLIMA PO overall objective is to boost adaptation to climate change through climate-smart water resources management at the river basin district scale by implementing NAS measures tailored-made on the local characteristics and climatic peculiarities present in the district.

This will be done by improving district governance in water resource management and ensuring policy, funding and technical coordination and coherence; shared climate knowledge production (tools and methodologies); building capacity and awareness, increasing stakeholder participation; improving water security and climate resilience through selected pilot actions replicable in the river basin and beyond; mobilizing complementary funding that will support the implementation of extended and costly measures focused on renaturation, flood risk mitigation and prevention, integration of planning tools, and activating public engagement.

CLIMA PO will launch a Multilevel Governance Deal with dedicated task forces to foster a coordinated planning approach at National, Regional and Local level starting from the existing River Basin Management Plan and leading to the mobilization and coordination of several sources of funding (420+ mil€ out of which 350+ mil€ already granted).

CLIMA PO is led by the National Po River Basin District Authority (ADBPO) chaired directly by the Minister for Ecologic Transition and responsible for the implementation of the NAS at district level.

The consortium covers the whole geographical river basin, all levels of Governance (National, Regional, Local) and necessary competences with 3 major research institutes on board.

LIST OF PARTICIPANTS

PARTICIPANTS

Grant Preparation (Beneficiaries screen) — Enter the info.

| Number | Role | Short name | Legal name | Country | PIC |
|--------|------|------------|--|---------|-----------|
| 1 | COO | ADBPO | AUTORITA DI BACINO DEL FIUME PO | IT | 989041683 |
| 2 | BEN | AIPo | AGENZIA INTERREGIONALE PER IL FIUME PO | IT | 941034055 |
| 3 | BEN | ARPAE | AGENZIA REGIONALE PER LA PREVENZIONE, L'AMBIENTE E L'ENERGIA DELL'EMILIA-ROMAGNA | IT | 999454633 |
| 4 | BEN | ARPAP | AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE | IT | 999468892 |
| 5 | BEN | UNIBO | ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA | IT | 999993953 |

| PARTICIPANTS | | | | | |
|---|-------------|-------------------|---|----------------|------------|
| <i>Grant Preparation (Beneficiaries screen) — Enter the info.</i> | | | | | |
| Number | Role | Short name | Legal name | Country | PIC |
| 6 | BEN | ANBI | ASSOCIAZIONE NAZIONALE DELLE BONIFICHE, DELLE IRRIGAZIONI E DEI MIGLIORAMENTI FONDIARI | IT | 884896081 |
| 7 | BEN | CMCC | FONDAZIONE CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI | IT | 999419422 |
| 8 | BEN | CMBO | CITTA METROPOLITANA DI BOLOGNA | IT | 933452729 |
| 9 | BEN | ERSAF | ENTE REGIONALE PER I SERVIZI ALL' AGRICOLTURA E ALLE FORESTE | IT | 899156245 |
| 10 | BEN | LEGAMBIENTE | LEGAMBIENTE ASSOCIAZIONE ONLUS | IT | 986523951 |
| 10.1 | AE | Legamb Lomb | LEGAMBIENTE LOMBARDIA ONLUS | IT | 935375657 |
| 10.2 | AE | Legamb Veneto | LEGAMBIENTE VENETO ASSOCIAZIONE DI PROMOZIONE SOCIALE | IT | 896190373 |
| 10.3 | AE | LEGAMB PVDA | LEGAMBIENTE PIEMONTE E VALLE D'AOSTA ONLUS | IT | 929074246 |
| 10.4 | AE | LEGAMB ER | LEGAMBIENTE EMILIA-ROMAGNA | IT | 925869657 |
| 11 | BEN | POLITO | POLITECNICO DI TORINO | IT | 999977754 |
| 12 | BEN | SMAT | Società Metropolitana Acque Torino S.p.A. | IT | 991745946 |
| 13 | BEN | RER | REGIONE EMILIA ROMAGNA | IT | 999482375 |
| 14 | BEN | RPiemonte | REGIONE PIEMONTE | IT | 999476943 |
| 15 | BEN | RLombardia | REGIONE LOMBARDIA | IT | 999654065 |
| 16 | BEN | SOGESCA | SOGESCA s.r.l. | IT | 984301778 |
| 17 | BEN | ARPA Lombardia | AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE (ARPA) DELLA LOMBARDIA | IT | 954110431 |
| 18 | BEN | ANBI-ER | ANBI - EMILIA ROMAGNA | IT | 887507709 |
| 19 | BEN | ANBI Lombardia | UNIONE REGIONALE BONIFICHE IRRIGAZIONI E MIGLIORAMENTO FONDIARI PER LA LOMBARDIA | IT | 887622848 |
| 20 | BEN | ANBI PIEMONTE | UNIONE REGIONALE BONIFICHE IRRIGAZIONI PIEMONTE | IT | 887727123 |
| 21 | BEN | ANBIVENETO | ASSOCIAZIONE REGIONALE DEI CONSORZI DI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE | IT | 887733428 |

LIST OF WORK PACKAGES

| Work packages | | | | | | |
|---|---|-------------------------|-------------------------------|--------------------|------------------|--|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| WP1 | Project management and coordination | 1 - ADBPO | 136.50 | 1 | 108 | D1.1 – Project work plan D1.2 – Project handbook D1.3 – Green Management Guidelines D1.4 – Data management plan D1.5 – External Advisory Board guidelines D1.6 – Agenda and minutes of project meetings D1.7 – Agenda, minutes and contributions of EAB meetings D1.8 – Progress report 1 D1.9 – Progress report 2 D1.10 – Progress report 3 |
| WP2 | Multilevel Governance and Coordination of Funding | 1 - ADBPO | 199.00 | 1 | 108 | D2.1 – Analysis of present governance, legislation and planning tools D2.2 – Multilevel Governance Deal structure, programme and commitment (including the institution of the Adaptation Observatory) D2.3 – Brief Annual report on MGD activities and experience D2.4 – Programmatic document of rules and data shared and made openly accessible (Data management plan) D2.5 – Programmatic document on the composition and roles of the task force on complementary funds |

| Work packages | | | | | | |
|---|---|-------------------------|-------------------------------|--------------------|------------------|---|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| | | | | | | D2.6 – Annual report on the allocation and use of complementary funds D2.7 – Policy Recommendations at EU, National and Regional level D2.8 – Final report and an action plan defining the long term funding streams for adaptation measures and technical tools implemented during the project, as well as the adoption of coordinated measures at District scale |
| WP3 | Technical and Methodological Approach | 7 - CMCC | 133.50 | 1 | 108 | D3.1 – Data Management Plan (DMP) D3.2 – Data collection and review of their usability/usefulness for the project D3.3 – Climate Risk Indices implemented at district level with the municipal granularity D3.4 – PO RIVER risk platform D3.5 – Report - Actual and potential use of the Po River Risk Data Platform - legacy and sustainability |
| WP4 | Stakeholders Engagement and Capacity Building | 1 - ADBPO | 259.90 | 1 | 108 | D4.1 – Mapping and analysis of district and regional stakeholders in water management D4.2 – CLIMAX PO Stakeholder Boards – engagement and contributions D4.3 – User Requirements for a CLIMAX PO Adaptation Platform D4.4 – LDN baseline and shared indicators D4.5 – Capacity Building – contents and outputs D4.6 – Capacity Building programme for soil management in conservation agriculture |

| Work packages | | | | | | |
|---|--------------------------------------|-------------------------|-------------------------------|--------------------|------------------|---|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| | | | | | | D4.7 – Capacity Building on Water and Adaptation in Metropolitan and Diffuse Urban Centres |
| WP5 | Water Management | 11 - POLITO | 246.10 | 1 | 72 | D5.1 – Hydrological, morphological and sedimentological data in the river reaches downstream of the reservoirs D5.2 – Future climate change impacts on water uses and multisector dynamics at district scale D5.3 – Proposal for an agreement for the management of regulated water resources in lakes at the district-scale D5.4 – Water Storage Plan D5.5 – Proposal for an agreement for the management of regulated water resources in lakes at the District-scale D5.6 – Future climate change impacts on water uses and multisector-dynamics at district scale |
| WP6 | Nature and Ecosystem-based solutions | 7 - CMCC | 182.40 | 1 | 72 | D6.1 – Guidelines for the effective restoration of riparian vegetation in the context of climate change D6.2 – Review of ecosystem services, green infrastructure and assessment methods D6.3 – Assessment of ecosystem services D6.4 – Green infrastructure network analysis D6.5 – Definitive project D6.6 – Guidelines for the planning and recommendations for policy makers |

| Work packages | | | | | | |
|---|----------------------------------|-------------------------|-------------------------------|--------------------|------------------|--|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| WP7 | Defence and Water Infrastructure | 7 - CMCC | 369.10 | 1 | 72 | D7.1 – Characterization of precipitation by means of statistical and hydrological approaches D7.2 – Scenario based analysis for flash floods in urban environments reporting details about hydraulic and slope stability hazard zoning D7.3 – Deployment of Modelling hydrological-hydraulic tools D7.4 – Methodological Report for the choice of the most suitable hydrological-hydraulic modelling solutions in the planning, warning and management phases of the emergency – complemented by the guidelines for the management of extreme precipitation events. D7.5 – Integrated monitoring and modeling system implemented D7.6 – Decision support system implemented and Tested D7.7 – Report on the use of the integrated system and the decision support system D7.8 – Recommendations about the adoption of the actions carried out within the WP7: design stage D7.9 – Recommendations about the adoption of the actions carried out within the WP7: implementation stage |
| WP8 | Water and Land Management | 9 - ERSAF | 153.20 | 1 | 72 | D8.1 – Internal report on adaptation |

| Work packages | | | | | | |
|---|--|-------------------------|-------------------------------|--------------------|------------------|--|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| | | | | | | actions already undertaken and possible improvements D8.2 – Good Practices for adaptative agriculture D8.3 – Guidelines for operational application and integration into policies and description of models and interoperability criteria D8.4 – Interim report on capacity building activities carried out D8.5 – Final report on capacity building activities carried out D8.6 – Report of modeling elaborations with current and future climate scenarios D8.7 – Report on implementation of LDN methodology D8.8 – Implementation of LDN methodology D8.9 – Guide lines for the planning and raccomandations for policy makers |
| WP9 | Monitoring and Evaluation of Project Impacts and Complementary Actions | 5 - UNIBO | 179.20 | 1 | 108 | D9.1 – Extract of the project data from the LIFE KPI webtool (month 9, mid term and end of the project) D9.2 – Socio economic Report (mid term) D9.3 – Socio economic Report (final) D9.4 – Evaluation Report on Climax Po economic impact D9.5 – collection of business models D9.6 – Periodic report on the status of the project |

| Work packages | | | | | | |
|---|--|-------------------------|-------------------------------|--------------------|------------------|---|
| <i>Grant Preparation (Work Packages screen) — Enter the info.</i> | | | | | | |
| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
| | | | | | | D9.7 – 3 reports with the results of the monitoring of the indicators at the end of each phase. D9.8 – Assessment and selection of the KPIs |
| WP10 | Communication, Dissemination and Networking | 10 - LEGAMBIENTE | 417.20 | 1 | 108 | D10.1 – Communication Plan D10.2 – Handbook of good practices D10.3 – Press Review D10.4 – Dissemination Plan |
| WP11 | Sustainability, Replication and Exploitation | 1 - ADBPO | 104.70 | 1 | 108 | D11.1 – Sustainability and Exploitation plan D11.2 – Report on the contributions to the update of the Po RBMP and other district plans D11.3 – Report on the contributions to the update of the NAS and NAP D11.4 – Report on the exploitation of project results at district level D11.5 – Replication plan D11.6 – Report on peer-to-peer, replication and exchange activities |

Work package WP1 – Project management and coordination

| | | | |
|----------------------------|-------------------------------------|-------------------------|----------|
| Work Package Number | WP1 | Lead Beneficiary | 1. ADBPO |
| Work Package Name | Project management and coordination | | |
| Start Month | 1 | End Month | 108 |

| Objectives |
|---|
| <p>To reach the project objectives and fulfil the requirements of the Grant Agreement, the following objectives for the WP1 are set:</p> <ul style="list-style-type: none"> ▪ To ensure coordination within the project partners, WP and task leaders, ▪ To ensure deliverables are fit for purpose and will enable benefits to be realised, ▪ To manage risks, opportunities and issues as they occur, ▪ To ensure ongoing and successful implementation of the project activities. <p>Expected Results: smooth management of the partnership, of the project activities and of the relationship with and reporting to CINEA</p> |

| Description |
|---|
| <p>Project management and coordination activities are essential for the smooth implementation of the action and the delivery of expected results and deliverables.</p> <p>This WP will be implemented throughout the 3 phases of the project from the very beginning till the delivery of the final report.</p> <p>T.1.1 Project coordination (ADBPO, all partners):</p> <p>The project will be managed by the project coordinator together with the Project Steering Committee (SC). The coordinator will be responsible for the overall coherence of the project, as well as the financial, technical and administrative aspects. The Project Steering Committee is the supporting group to the coordination, and it is composed by one member for every organization present in the consortium. It constitutes the highest decision board, and its main task will be project governance. A Responsible for each group of actions or thematic pillar will be defined within the Steering Committee:</p> <ul style="list-style-type: none"> • Multilevel Governance • Complementary Funding • Approach to overall NAS implementation • Stakeholders & Capacity Building • Water Management • Nature and Ecosystem-base solutions • Defence and Water Infrastructure • Land Management • Water, Adaptation and Urban Centres • Monitoring and Indicators • Communication, Replication <p>ADBPO will be the general coordinator of the project, supported by WP and task leaders, following the proposed project hierarchy. All project control and monitoring systems will be designed to ensure the successful completion of the project, on time and within the set budget. An appropriate consortium agreement to manage the ownership and access to key knowledge will be prepared. However, most of the relevant deliverables will be public.</p> <p>Due to the magnitude and duration of the project activities an overall project work plan will be defined and maintained during the project's lifetime and detailed at the beginning of each of the 3 project phases (D1.1).</p> <p>Work package and task leaders will ensure that project partners have a clear picture of the concrete activities. They will organise the exchange of information between partners on topics related to the specific task of WP. WP and task leaders will check for the quality and consistency of work for achieving the planned outputs. Furthermore, they will be responsible for the timely submission of their respective deliverables.</p> <p>The Project Manager will set up the CLIMAX PO Network Office at the beginning of the project. The office includes a groupware for sharing documents, calendars, deliverable templates, communication material, draft deliverables and deliverable reviews, and more. The project organisation, contact data, procedures (deliverable reviews, authoring for joint publications, risk management, security assessment, ethics guidelines, etc.), server folder structures, mailing list information, and more will be provided in a project handbook that will be updated whenever required. The initial version of the CLIMAX PO project handbook will be submitted as a project internal deliverable (D1.2).</p> |

T.1.2 Project meetings (ADBPO, all partners):

Communication between the project partners is planned by regular in-person and online project meetings. Communication is planned by emails, telephones, and teleconferences. Every 6 months, a project review meeting will be held, minutes and notes will be taken that contain a clear list of activities to be carried out by project partners in the subsequent period. Before each project review meeting, an online meeting will be held to discuss the status of the WPs and tasks. It will allow the consortium to have more time during a review meeting to focus on the content-related issues of the project. Monthly online meetings will be used as specific WP and task progress review meetings, where the implemented activities are checked against the project plan. Results and deliverables will be discussed and approved. In case of delays, corrective actions will be discussed and agreed upon during online meetings.

T.1.3 Project monitoring and evaluation (ADBPO, all partners):

The achievement of expected project impacts and fulfilment of project performance indicators is a crucial aspect of the LIFE programme and as a result of continuous and effective work on the implementation of project activities. Although the respective WP and task leaders will follow up the progress and bring their best performance to achieve the expected project results, the coordinator will supervise and be a back-up for contentious monitoring on project impacts and performance indicators. Every quarter, the coordinator in cooperation with WP and task leaders will gather information from all project partners and complete a checklist on status. The results will be presented to partners, and in case of essential diverges, e.g., delays in the execution of WPs, in reaching milestones, and if partners in the consortium are not performing according to the project plans, etc., the issues will be addressed timely and according to the internal risk management procedure developed by the coordinator at the beginning of the project. Risks will be identified through the project management hierarchy and will be promptly communicated to all project partners.

T.1.4 Project reporting, financial management and communication with CINEA (ADBPO, all partners):

Coordinator will ensure the proper management and administration of the project, appropriate contact with the CINEA and the European Commission, and will communicate relevant and timely information on the necessary steps related to the content of the work. The consortium will perform and execute all legal, contractual, financial, and administrative obligations and any tasks as stipulated in the project Grant Agreement. Coordinator will be responsible for timely coordination, development, and delivery of progress, interim and final project reports, and related costs statements. Coordinator will collect reports from work package leaders and will communicate with the project partners.

T.1.5 Common CINEA dissemination activities (ADBPO, all partners):

Coordinator will contribute, upon invitation by the CINEA, to common information and dissemination activities to increase synergies between, and the visibility of LIFE supported actions.

T.1.6 Capacity building of the project consortium (ADBPO, all partners):

Based on the experiences of the previous EU projects, it is essential that all project partners, initially as well as throughout the project, get the opportunity to exchange between each other to be up to date with the state-of-the-art skills and techniques for implementing specific project activities.

The task leader in cooperation with the responsible partners of the different topics will organise regular online workshops throughout the first quarter of the project addressing the specific needs of the partners. This activity will be mainly covered by the project consortium since each project partner has expertise in one of the specific topics.

T1.7 Green Management (ADBPO, SOGESCA, all partners)

The coordinator will be supported in this task by SOGESCA expert in environmental and energy management systems (EMAS, ISO 14001, ISO 50001), eco-design, eco and green labelling, environmental product declarations and, in general, standards for greener products.

At the beginning of the project, the coordinator and SOGESCA will produce and share guidelines for green project management with indications and procedures (inspired by EMAS compliant, environmental management systems) for green (public) procurement, traveling and sustainable (possibly, carbon-neutral) events.

Guidelines will include mandatory actions and a set of voluntary-based initiatives to be applied throughout the project. Details are described in chapter 4.3.

T1.8 External Advisory Board (ADBPO, all partners)

An External Advisory Board (EAB) will be established at the start of the project with members from relevant national and international leading institutions, among which: representatives of other Italian and European River Basin Management Authorities, National and International Environmental and Adaptation experts, experts on Socio-economic impacts of adaptation measures, expert on financing tools for adaptation to climate change, with more details specified in chapter 4.2 of this Annex. Its mission is to implement a quality check on the project activities and together with the Steering Committee contribute to the quality management of the project.

The main tasks of the External Advisory Board are:

- To provide knowledge and experience from technical, scientific, policy, and practical points of view;
- To help to refine the work program according to quality criteria;
- To review the outputs and progress of the project and provide reports for improvement;
- To maintain the project consistent with the horizontal principles and approaches of the project: multi-level governance, coordination of funding, capacity building, stakeholder engagement, sound monitoring, replication, sustainability

• To foster opportunities for exchange of good practices with other national and international river basin districts and improve replicability
 A short list of candidates will be drafted during the kick off meeting. The EAB will meet once a year, back-to-back with consortium meetings
 T1.9 Independent Auditing (ADBPO, all partners)
 The financial management of the whole project will be certified by an independent auditor, either a person with the qualification provided for by law, or an auditing company. The independent financial auditor will be in charge of the verification of the financial statements, and he/she will issue a certification whenever an interim payment is requested, as well as for the final cost claim. The independent auditor will be selected with a public tender as to assure the best value for money, and the project manager will agree with the auditor on procedures and improvements for future audits. The costs for the auditing activities (ca. 90.000€) will be in ADBPO budget.

Work package WP2 – Multilevel Governance and Coordination of Funding

| | | | |
|----------------------------|---|-------------------------|----------|
| Work Package Number | WP2 | Lead Beneficiary | 1. ADBPO |
| Work Package Name | Multilevel Governance and Coordination of Funding | | |
| Start Month | 1 | End Month | 108 |

| Objectives |
|---|
| <p>SO1 Improving Governance of climate adaptation at Po River District Basin Level Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:</p> <ul style="list-style-type: none"> • coordinated planning processes and instruments across vertical and horizontal governance levels; • coordinated and integrated management of funds dedicated to soft and hard adaptation measures in the project area; • monitoring, reporting and evaluation methods and practices for climate adaptation – in support to WP9 • reforms of water allocation, ecological flow, and reservoir management regimes and practices – in coordination with WP5 to 8 • innovative governance mechanism building upon existing multi-stakeholder partnerships; • mainstreaming of nature/ecosystem-based adaptation into sectoral policies – in coordination with WP6 • contribution to promotion of adaptation planning in urban areas – in coordination with WP4 and WP10 • contribution to the revision and update of national and regional rules, regulations, strategies and plans – in coordination with WP11 <p>SO5. Institutionalisation of climate adaptation at Po River Basin District level. Making climate adaptation a permanent part of the River Basin District governance, by means of:</p> <ul style="list-style-type: none"> • a consolidated and permanent multi-level governance platform with dedicated, thematic task forces • cross-sectoral working groups mainstreaming climate adaptation in different sectors and highlighting dedicated funding streams • technical guidelines and policy recommendations to mainstream climate adaptation in the revision and update of plans, strategies and policies – in coordination with WP5-6-7-8 <p>Expected Results:</p> <ul style="list-style-type: none"> 1 SWOT analysis of present governance, legislation and planning tools 1 Operative Multilevel Governance Deal (MGD) with dedicated task forces on specific adaptation topics (at least 2 meetings per year) 1 Adaptation Observatory with stakeholders agreement for collection and sharing of open-access data 1 MGD task force dedicated to Coordination and Monitoring and Complementary Funding (at least 2 meetings per year) 4 Cross-sectoral working groups (one in each partner Regional Administration) contributing to streamline existing funding streams and earmark them for adaptation measures (at least 2 meetings per year) <p>At least 3 reports with policy recommendations contributing to the institutionalisation of climate adaptation at District and Regional level</p> |

| Description |
|---|
| <p>This WP focuses on the analysis and reorganization of political governance processes and territorial processes at District</p> |

level promoted through a Multilevel Governance Deal (MGD) and its dedicated task forces for the coordination of the key stakeholders and funds necessary to implement the NAS in the District.

Given the large amount of data on which many of the project actions will be based, the first year of phase 1 will be dedicated to a series of preliminary activities aimed at analysing the current legislation and researching and analysing the existing technical documentation to consolidate a knowledge base on which the Multilevel Governance will be built. Based on existing knowledge, by the end of Phase 1 the WP will deliver an operative MGD, an Adaptation Observatory and will start coordinating complementary funds. It will also initiate the task on development of policy recommendations in coordination with WP5-6-7-8 and 9.

The multilevel governance model developed and tested in this action will serve as a pilot case for all the other river basin districts in Italy and beyond, as part of the replication and exploitation potential available for WP11.

It will also represent the permanent platform to guarantee the sustainability of the actions after the end of the project.

Task 2.1 Mapping and review of planning and legislative tools (ADBPO, AiPO, SOGESCA, RPiemonte, RLombardia, RER, CMBO, SMAT) – (M1-9)

This task will include a mapping of the complex institutional and organisational system at District level including planning and legislative tools and their role at District and Regional level and a mapping of the relevant authorities and stakeholders and their relations among each other, outlining conflict and/or opportunities and examples of existing cooperation – this will represent the baseline for the following WP activities, starting with task 2.2

The task includes:

- an analysis of the legislative and planning tools related to water resource and its uses at District level to identify and categorize the entities that have the legal mandate, role and, possibly, competences to manage the water resource with a focus on risk management and adaptation to climate change.
- mapping of the relevant entities (ie. Regional Administrations, Regional Environmental Agencies, Metropolitan Areas, Municipalities, Utilities, Land Reclamation Authorities) and their relationship with one another, including overlapping of competences, roles and legal obligations.

In particular, the second step will allow to identify:

- overlapping and/or gaps in the governance system
- good and bad practices in terms of voluntary cooperation and/or conflicts

A SWOT analysis will allow to highlight strengths and weaknesses, but also to identify opportunities and threats to a smooth cooperation at district level towards the introduction of permanent climate adaptation planning and implementation in water management and the NAS.

Task 2.2 Multilevel Governance Deal (ADBPO, AIPO, CMCC, SOGESCA, CMCC, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, RPiemonte, RLombardia, ERSAF, RER, SMAT, CMBO, all other partners) – (M7-108)

The focus of this task is on institutional interplay and governance gaps of climate change adaptation in water management, singled out in the Italian NAS as one of the most challenging barriers to adaptation.

The consortium will work on strengthening the governance assets and political processes, fostering policy coherence, mainstreaming, vertical and horizontal integration of adaptation policies, promoting public-private partnerships, disclosing climate related risk and incentivising investments in climate-resilient and low-carbon development of water-intensive sectors.

The coordination of national, regional, and local strategies and plans will be promoted through a "Multilevel Governance Deal" (MGD), favouring the interaction between policy makers and technical experts at different level, stakeholders, and research bodies.

The project coordinator Po River Basin District Authority (ADBPO) will lead the MGD due to its relevant national programming role on the district. ADBPO is governed by the Conferenza Istituzionale Permanente (Permanent Institutional Conference), a decision-making body chaired directly by the Minister for Ecologic Transition and participated by the National Civil Protection Agency, the Presidents of the Regions located in the river basin district and by the relevant other Ministries. The Permanent Institutional Conference is technically supported and consulted by the Conferenza Operativa (Operative Conference) a technical body established within ADBPO, which enjoys the participation of national and regional public water managers and experts from the different Ministries and Regions located in the river basin district.

Therefore, ADBPO ensures the direct involvement of the National level, while the project partners and their network of stakeholders complete the Inter-regional, Regional, and local level.

The MGD will lead the strategic discussion concerning the organization of multilevel governance, the definition of adaptation objectives at the district scale and the principles of coordination and 'vertical' and 'horizontal' integration of adaptation policies in the various sectors of public planning.

It will meet periodically and will define several thematic working groups (task forces). The different task forces will address the risks associated with climate change and adaptation actions whose effects fall beyond administrative regional borders or that require coherent implementation throughout the district.

At this stage, the planned task forces will be dedicated to:

- Water Management for adaptation
- Nature and Ecosystem-based solutions for adaptation
- Defence and Water Infrastructure for adaptation
- Land Management for adaptation
- Water, Urban Centres, and adaptation
- Public and private funding for adaptation
- Stakeholders engagement and capacity building

Task 2.3 Adaptation Observatory and sharing of open-access data (ADBPO, AIPO, CMCC, SOGESCA, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, RPiemonte, ARPAP, RLombardia, ARPALO, RER, ARPAE, SMAT, CMBO) (M7-108)

Task 2.3.1 – Adaptation Observatory

Coherently with EU and National Guidelines, the MGD will create an observatory that will contribute to monitoring and evaluation of the implementation of the NAS at District level and will feed information to WP9 (Monitoring).

The Observatory will collect and elaborate a summary on the progress of adaptation measures, compatible with the requests and commitments deriving from the European Strategy on Adaptation and its recent and future modifications. The first objective of the Observatory is to develop a set of standardized adaptation measures (following the example of the types of measures in the context of the Water Framework Directive), starting from the measures developed in the National Adaptation Strategy as well as from European indications. At the same time, the consortium will identify indicators for evaluating the performance of adaptation measures within the basin district. These will be used for the bi-annual assessment of the adaptation measures implemented within the project area, in cooperation with WP9 monitoring.

Task 2.3.2 – Agreements on collection and sharing of open-access data

This action aims at reaching agreements at institutional and regional stakeholder level that guarantee a continuous flows of data at district scale, adequate to the needs of the scientific level and aligned with existing National and European systems, such as the Water Information System for Europe (WISE), Copernicus Climate Change Service (C3S), and the National Information System for the Management of Water Resources in Agriculture (SIGRIAN).

This sub-task will first define a management plan for the acquisition, dissemination and sharing of open-access data, providing guidelines for their use and storage. It will work in close synergy with WP3 providing the management and policy bases for the development of the data exchange platform.

Task 2.4 Coordination of complementary funds (ADBPO, AIPO, RER, RLombardia, RPiemonte, SMAT, CMBO)

A task force of the Multilevel Governance Deal will be dedicated to the analysis and coordination of funds (both public and private) that are aimed at or in support of the implementation of measures included in the NAS.

ADBPO and AIPO (Po River Interregional Agency, project partner) will lead the task force and will work along with the Regional Administration partners (Lombardia, Piemonte, Veneto, Emilia Romagna).

Each institutional member of the task force will have an internal, cross-sector working group to monitor every possible opportunity of complementary funding, as National, Regional and EU structural funds are included in programmes and plans that are often spread in different sectors and departments of the same Administration. The idea is to streamline existing funding streams and earmark them for adaptation measures.

The task force will monitor the use of complementary funding integrating the measures already implemented through the LIFE contribution.

ADBPO and AIPO are governmental structures that are directly linked with the Ministry for Ecologic Transition, and they represent the National level in the coordination of complementary funding.

Regional Administration partners (Lombardia, Piemonte, Veneto, Emilia Romagna) will also play a very relevant role as Managing Authorities of European Regional Development Funds in their Region as well as user of other relevant National and Regional sources.

The consortium will also work on influencing the planning of EAFRD 2023-2027 and ERDF at regional level.

Considering the duration of the project, also the negotiation of the next (2028-2035) programming period will be targeted in due time.

Task 2.5 Integration of complementary funding and mobilization of additional funding (ADBPO, AIPO, ANBI, SOGESCA, RER, APRAE, RLombardia, ARPALO, RPiemonte, ARPAP, SMAT, CMBO, LEGAMBIENTE) (M13-108)

The MGD and its dedicated task force will also work with the relevant Regional and National administrations to catalyse other sources of complementary funding that could directly or indirectly support the implementation of the NAS in the District, such as:

- Cohesion policy funds still under negotiation
- Regional and National funds
- Further resources from the NRRP
- Private funding (at national and/or local level)
- Coordination with ongoing EU funded projects (ie. LIFE IP PrepaAIR and GESTIRE 2020) – see also WP10

- Coordination with New EU funded projects
 Also, this action foresees the involvement of the MGD task force on public and private funding for adaptation in the development of new proposals to be submitted to the EU Commission and its agencies. At this stage the programmes targeted are:

- EAFRD and EARD Regional programmes
- Horizon Europe (Climate Mission)
- Interreg (Greener Europe Pillar)
- LIFE (Climate Adaptation and Mitigation)

Task 2.6 Policy recommendations and Institutionalization of project results (ADBPO, AIPO, ANBI, SOGESCA, RER, APRAE, RLombardia, ARPALO, RPiemonte, ARPAP, SMAT, CMBO) (M25-108)
 Thanks to the inputs of the Adaptation Observatory and the monitoring contribution and evaluation activities in WP9 the consortium and the MGD will propose policy recommendations at National and Regional level and, if necessary, at EU level.
 They will be produced by the end of phase 1, phase 2 and 1 year before the end of the project, in time to collect feedbacks and provide further details.
 Whenever possible, the MGD members will promote their use at District and Regional level directly in the constant revision process of policies and planning tools lead by the competent authorities to reinforce institutionalisation of project results.
 Policy recommendations will integrate also the work of thematic WP5, 6, 7 and 8 which all have a task dedicated to technical guidelines and policy inputs summarizing the work done and its methodological results coming from the pilot actions.
 This institutionalisation process (starting with task 2.2 and going through the whole WP2) will feed into WP11 dedicated to sustainability and replication where a task is dedicated to the uptake of project results (mainly, adaptation measures and funding streams) into the revision of river basin plans and strategies.

Work package WP3 – Technical and Methodological Approach

| | | | |
|----------------------------|---------------------------------------|-------------------------|---------|
| Work Package Number | WP3 | Lead Beneficiary | 7. CMCC |
| Work Package Name | Technical and Methodological Approach | | |
| Start Month | 1 | End Month | 108 |

Objectives

SO2. Improve the production of shared climate knowledge
 Improving the understanding of climate risk within the district, and creating a platform for harmonised, quality assured knowledge and services, through:

- a) better understanding of climate variability and change related hazards, vulnerabilities and risks;
- b) exploitation of modern Earth Observation, System Model and open public-sector information;

Expected results: Harmonised collection of locally/regionally rehabilitated and otherwise not accessible data from various sources and national/Pan-European data available from other sources; Climate Risk Index as a composite index built upon dynamic interplay of hazard, exposure and vulnerability and adapted for different purposes; River basin district-wise risk (data) platform

Description

This WP is dedicated the creation of common tools and methodologies to be used during the project implementation. During phase 1 (M1 to M36) the activities will focus on all tasks T3.1-T3.3 mainly on data collection and analysis (T3.1), draft implementation - mock-up of the Risk Data Platform, and development of the composite climate risk index. By the end of phase 1 the WP will deliver D3.1-D3.3.

Task 3.1 Data availability, collection, and management (CMCC, ADBPO, ARPAAE, ARPAP, ARPALO) (M1-18)
 This task includes activities meant to collect, review & synthetize, and improve access to actionable knowledge (e.g. knowing what, knowing how, or knowing where) and services needed as input for other tasks (T3.2-T3.3) and WPs. The result of this task is to identify, rehabilitate and make accessible sources of reliable, quality assured and exploitable information, data and knowledge (climate, adaptation ad resilience) services which can be used for the scope of this project. The information and services will cover (i) climate related hazard, including historic climate

records (such as ARCIS), catalogues of extreme events (see task T3.3 for types of hazards), reanalysis, forecasts, projections and indices used in outlooks and early warnings; (ii) models and datasets describing high-resolution exposure for climate risk assessment (covering physical and socio-economic indicators consistent with those defined in WP9), such as institutional and volunteered geographical information (VGI), Earth observation products depicting the physical and socioeconomic features of the built environment, population and natural capital; and (iii) factors driving vulnerability of households, production processes and companies & assets climate extremes; their dynamic interactions and disaggregation disentangling those most vulnerable.

We will address what climate and non-climate related data and information are available and are/can be used for comprehensive, climate risk assessments at local and regional scales, how available climate services are used to guide adaptation efforts, how adaptation efforts are measured and evaluated, what typologies exist or could be improved to describe exposure and vulnerability to climate change and capacities/capabilities to respond to climate threats. We will explore data availability from regional/national and European sources, identify gaps and assess how these can be overcome. We will work with the EC Disaster Risk Management Knowledge Centre (DRMKC) and the development team behind the Risk Data Hub, the Copernicus Earth Observation (including Security, Land Monitoring, Marine Monitoring and Climate Change) services, the European Environment Agency (EEA, and use indicators collected and provided), as well as EC Horizon 2020 and Horizon Europe projects (such as EUCP- European Climate Prediction system, Climateurope). We will build upon and encourage use of quality assured open access data (including INSPIRE data infrastructure and public sector information, PSI) and open-source software products, and their use/exploitation will be facilitated by dedicated training, datathons and capacity building workshops (WP4, T4.5). Mutual agreements for using protected background information will be facilitated to ensure transparent cooperation across the river basin district, in collaboration with the WP2/T2.3 dealing with the data sharing and exploitation.

Task 3.2 Scenarios, Profiles and Climate Services (CMCC, ADBPO, ARPAP, ARPAE, ARPALO) (M7-108)

This task will develop a platform that allows to systematise and thus make available data and information, also exploiting activities already implemented (e.g. Mistral, Highlander, AdriaClim) relating to the atmospheric variables of interest for the protection of water resources in quantitative and qualitative terms and to the associated impacts. The platform will primarily include both observed and simulated data for the entire District by considering different periods of analysis. Analysis will be based on high (about 10 km) and/or very high (between 1-2 km) resolution climate projections obtained by the dynamical and statistical downscaling of CMIP5 and CMIP6 scenarios with the scope to include also multi scenarios and multi approach analysis to assess the uncertainty associated to the local climate analysis. In addition to the data storage, it will host synthetic indicators, identified also thanks to the support of the various stakeholders acting on the topics covered by the project. The platform will support the development of all actions on the various areas investigated allowing them to be fully "climate-proof". In the same way, the platform will host the results and information produced within the project for the District that can be replicated even in related contexts for geomorphological or socio-economic characteristics in order to ensure the inclusion of the different stages of the risk analysis. The output data provided through the platform will be interoperable, standard-compliant and accessible with open-source software. Specifically, the output data can be processed by using a suite of software (e.g. Matlab, R, Arcmap, QGIS, Office package).

Task 3.3 Climatic risk indices at sub-basin scale (CMCC, ADBPO, ARPAE, ARPAP, ARPALO) (M13-36)

This task will build upon and further refine the climate risk assessment methodology developed by CMCC within the frame of the Italian National Adaptation Plan (NAP) for the purposes of the Po River basin district adaptation process. The climate risk indices (CRIs) at river basin district levels and below will combine the information from the task T3.1 and T3.2 and complement them with indicators describing resilience and adaptive capacity. Hazard, exposure and sensitivity parameters will be integrated across five capital categories: natural, human, social, manufactured and financial. The multi-risk methodological framework will build upon the risk framing of the Sixth IPCC Assessment Report (AR6) and incorporate the risk originated from policy responses (including risk of maladaptation). We will build upon a close collaboration of CMCC with the Joint Research Centre JRC - Disaster Risk Management Knowledge Centre DRMKC (working group on Inform Risk index and Risk Data Hub) and the EC's Competence Center on Composite Indicators and Scoreboards. The family of composite indices will be co-developed with a range of stakeholders and policy makers and will be articulated for the key economic sectors and the most vulnerable social groups, implementing an operational procedure where the key risk components (i.e. hazard, exposure, and vulnerability) are represented by a set of proxies, selected, standardised and mapped through a tiered aggregation process. The indicators of hazards will cover various phenomena, including (any type of) floods (including flash, pluvial, fluvial & coastal floods/ storm surges), drought & water scarcity/security (including meteorological, agricultural/soil and hydrological droughts), heat-and cold waves, wind (intensity & footprints), (propensity for & susceptibility to) landslides and forest fire and others. The dynamic exposure elements will include population (disaggregated by social strata), tangible wealth/assets and built-up environment, infrastructures for essential services (such as transportation, energy but also social infrastructure such as schools, hospitals etc), and economic activities (e.g. added value disaggregated by economic branches), cultural heritage, etc. The indicators on exposure will be consistent with those defined by the Covenant of Mayors & suggested for the Sustainable Energy and Climate Action Plans (SECAPs), as referred and elaborated in WP9. Final Climate Risk

Index will inform climate risk disclosure and guide public and private investments in climate adaptation and disaster risk reduction.

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO – NATIONAL FOUND – New DTM/orthophoto surveys and satellite interferometric data analysis (10.000.000,00 €, not yet granted);

- ADBPO – NATIONAL FOUND – Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and/or system enhancement of water accounting (2.000.000,00 €, not yet granted);

- ADBPO – NATIONAL FOUND – Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts (6.300.655,00 €, not yet granted);

- RER – Reforestation project - “Mettiamo radici per il futuro” – Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts (3.250.000,00 €, not yet granted).

Work package WP4 – Stakeholders Engagement and Capacity Building

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|----------------------------|---|-------------------------|----------|
| Work Package Number | WP4 | Lead Beneficiary | 1. ADBPO |
| Work Package Name | Stakeholders Engagement and Capacity Building | | |
| Start Month | 1 | End Month | 108 |

Objectives

SO3. Building Capacity and Awareness. Accelerating climate adaptation through education, training and public awareness, by:

- filling the gaps in professional training, education and capacity building;
- capacity building for policy makers and technical experts of public administrations and civil society organisations
- building up public awareness and perception of climate risk, hence the culture of risk coping.

SO5. Institutionalisation of climate adaptation at Po River Basin District level. Making climate adaptation a permanent part of the River Basin District governance, by means of:

- a consolidated and permanent system of Stakeholder Boards and Capacity Building

Expected results:

1 SWOT analysis of present relevant authorities and stakeholders in terms of governance and coordination of funding
5 permanent Stakeholders Boards established (1 at District level and 4 at Regional level) and meeting at least once a year (plus, whenever necessary at local level)

Initial Stakeholder engagement dedicated to specific actions in wp3 (Adaptation Platform) and in wp8 (assessment of Land Degradation Neutrality)

Capacity building structure is set up and operative (MGD dedicated task force + Stakeholder Boards)

At least 3 capacity building actions (1 per project phase – at least 200 beneficiaries) with different focus according to target group and level of implementation of the project

1 permanent capacity building programme dedicated to soil management in conservation agriculture

Dedicated capacity building action on Water and Adaptation in Metropolitan and Diffuse Urban Centres (1 per project phase – at least 200 municipalities directly engaged and at least 1000 receiving communication)

Description

The project has tried to involve all key and relevant stakeholders since the drafting of the project proposal, however given the large amount of interested parties, some specific actions have been identified to involve and define the organisations that will be engaged and involved during the implementation of the actions.

These activities will take place mostly in the early stages of the project (phase 1) but consultation and coordination with relevant stakeholders will continue throughout the project duration thanks to the creation/cooperation of Regional and/or District Stakeholder Boards involving local authorities (municipalities or association of Municipalities) as well as technicians, environmental and socio-economic associations. Where Stakeholder Boards or similar structures already exist, issues related to the project will be introduced in their agendas.

Stakeholders will also be invited to participate in Capacity Building actions both as recipients as well as trainers, whenever appropriate.

This WP focuses on the initial and following involvement and consultation of relevant stakeholders necessary for the implementation of the project including governance, coordination of funding, capacity building and technical activities, as stakeholder engagement and participatory processes are strictly recommended by the NAS.

By the end of phase 1 the WP will deliver 1 SWOT analysis of present relevant authorities and stakeholders in terms of governance and coordination of funding, 5 permanent Stakeholders Boards established (1 at District level and 4 at Regional level) and meeting at least once a year (plus, whenever necessary at local level), Initial Stakeholder engagement dedicated to specific actions in wp3 (Adaptation Platform) and in wp8 (assessment of Land Degradation Neutrality), a Capacity building structure is set up and operative (MGD dedicated task force + Stakeholder Boards), at least 1 capacity building actions with different focus according to target group and level of implementation of the project, Initial capacity building action dedicated to soil management in conservation agriculture (preliminary to WP8 – at least 2 technical facilitators trained), 1 dedicated capacity building action on Water and Adaptation in Metropolitan and Diffuse Urban Centres.

Task 4.1 Mapping of relevant authorities and stakeholders in terms of governance and coordination of funds (ADBPO, AIPO, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, RPiemonte, RLombardia, RER, SMAT, CMBO, contribution from all other partners) (M1-6)

This task is co-related to task 2.1 but stresses the focus on the role of local, regional and district stakeholders. It includes:

- mapping of competent authorities identified through the analysis of the legislation and the relationships between them, both formal and informal ones;
- a broader mapping of stakeholders, both in terms of uses of the water resource (ie. farmers, energy companies) as well as competences, such as research bodies, the Italian Center for River Requalification (CIRF) and civil society associations. The first step will highlight virtuous examples of collaboration on a voluntary basis or any conflicts, while the second step will broaden the gaze on organizations other than public authorities with a formal mandate in the District, such as representatives of the productive sectors, water and energy services, developers of climate services, citizen associations and partnerships, such as the “River Contracts”.

A brief but comprehensive SWOT analysis will allow to highlight strengths and weaknesses, but also to identify opportunities and threats to a smooth cooperation at regional and district level towards the introduction of permanent climate adaptation stakeholders engagement.

Task 4.2 Stakeholder engagement and involvement: Stakeholder Boards (ADBPO, AIPO, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, RPiemonte, RLombardia, RER, SMAT, CMBO, contributions from other partners) (M1-108)
ADBPO and each regional administration engaged as beneficiary of the project will institute a “Stakeholder board” involving local authorities (municipalities or association of municipalities) as well as environmental and socio-economic associations, basin authorities, technicians and civil society in general.

Where already established by regional laws or voluntary approaches, the consortium will use the existing boards ensuring that the themes addressed by the project will be integrated in their agenda. The Stakeholder Boards will be called at least at the beginning of the project and following at the end of each project phase. The district and regional administrations will guarantee the sustainability of the Stakeholder boards also after the conclusion of the project, so as to ensure the involvement of key stakeholders in the overall implementation of the NAS.

Stakeholder Boards will also be called upon whenever necessary in the implementation of specific project actions, such as in the following task 4.3 (co-related to task 3.2) and task 4.4 (co-related to actions in WP8) or in broader activities such as the revision process of planning tools (see WP2 and WP11).

As at the beginning of the project Stakeholders Boards might not be immediately operative, specific stakeholders will be engaged directly for specific activities.

Task 4.3 Definition of the “stakeholder landscape” for the PO RIVER Adaptation Platform (ADBPO, CMCC, AIPO, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, RPiemonte, RLombardia, RER, SMAT, CMBO, contributions from all partners) (M1-9)

This action is necessary for the implementation of the Platform on scenarios, profiles and climate change in WP3 (task 3.2, lead by CMCC) through workshops and consultation.

The development of the PO River Adaptation platform – useful and usable by different stakeholders – requires an effective involvement of the potential users in the phases of definition, development and subsequent release of the platform. Involvement will take place through various initiatives, specifically:

- in the initial phase of the project, the definition of the “stakeholder landscape” will be carried out with the support of

all the project partners; it will eventually be supplemented by interviews with some individuals who have roles deemed strategic for the project;

- the identified stakeholders will be invited to participate in an initial (online) workshop. During the workshops, participants will discuss the Platform requirements (types of data, methods of interaction and interface, indicators to be included);
- the results of the workshop will be integrated with those collected through a web-survey that will be circulated among all potential interested parties;
- in correspondence with the release of the mockup version of the Platform, a webinar will be organized during which its features and details will be illustrated;
- following the webinar, a subsequent consultation phase will open (via websurvey) to collect suggestions and requests from Users.

Task 4.4 – Stakeholder engagement in co-design of KPIs to assess Land Degradation Neutrality (ERSAF, ADBPO, ANBIRL, RLombardia, CMCC) (M7-24)

This task creates the ground for following activities in WP8 and it foresees the selection of KPIs to assess Land Degradation Neutrality (LDN) through the Lombardia Regional Stakeholder Board and its network of stakeholders relevant for the pilot action (Municipalities, Mountain Communities, Local Action Groups, Provinces, Regional Government, River Basin Authorities, civil society organizations, citizens).

The task includes:

- identification of the indicators and the detection of the data necessary to define the “Baseline” to integrate existing data with information collected on the spot and ensure an adequate level of detail of the knowledge framework used at the hydrographic sub-basin intervention scale;
- analysis and processing of data and the mapping of the level of degradation of the territory considered at the beginning of the project (time t0);
- awareness raising among local authorities and the local stakeholders through a series of meetings (at least 3) on the project and task 8.3 which specifically concerns the topic of LDN;

Based on the feedback from the stakeholders, a pilot “hydrographic sub-basin” will be identified, which is where the task 8.3 will actually take place.

The local stakeholder board will oversee the implementation of the activities foreseen in WP8 and its monitoring.

Finally, for the purpose of ensuring the functional integration of the activities developed in the project with the initiatives launched at national level in the context of the application of the “Agenda for Sustainable Development 2030”, this task (through ADBPO) will keep a close interaction and liaison with ISPRA and with the National Land Degradation Neutrality (LDN) Working Group recently established by the Ministry for Ecologic Transition with the aim of reaching the definition and adoption of voluntary LDN targets and to define technical-scientific guidelines and lines of action for the updating of the National Action Program for the fight against drought and desertification as part of the new Strategic Framework 2018-2030.

Activities will take place in a hydrographic sub-basin that will be identified in the Oltrepò Pavese (Lombardy Region), in a territorial context characterized by dominant agricultural activity (also intensive and specialized).

Task 4.5 Capacity building (ADBPO, AIPO, ANBI, ANBIRP, ANBIRL, ANBIRV, ANBIRER, CMCC, UNIBO, POLITO, SOGESCA, Rpiemonte, RLombardia, RER, ARPAE, ARPALO, ARPAP, SMAT, CMBO, LEGAMBIENTE and its affiliates) (M7-108)

This action will reinforce the awareness and build the capacity of all the key actors and stakeholders involved in technical and financing activities dedicated to climate adaptation in the Po River basin district.

It will address the gaps in professional training, expertise for adaptation, and public perception of climate risk, and hence leveraging the efforts of all other actions pursued under this project.

At this stage, this includes activities dedicated to:

1. Consortium partners – fostering common knowledge on technical and financial aspect related to climate adaptation and public and private funding opportunities. Complementary funding for the NAS at district level.
2. National Administrations and their linked organisations / agencies – fostering knowledge on technical and financial aspect related to climate adaptation (ie. National competencies, Integration of National planning tools, public and private funding opportunities for implementing the NAS).
3. Regional Administrations and their linked organisations / agencies – fostering knowledge on technical and financial aspect related to climate adaptation (i.e., regional competencies and opportunities to integrate Regional planning tools) and public and private funding opportunities, including opportunities to integrate/support adaptation in Regional Structural Funds planning and the use of resources from the NRRP.
4. Local private and public stakeholders – fostering knowledge on technical and financial aspect related to climate adaptation with specific focus on the actions implemented at local level during the project (foreseen involvement of banks and financial institutions, utilities)
5. Local Governments (Metropolitan and Diffuse Urban Centres) – fostering knowledge on technical and financial aspect

related to climate adaptation with specific focus on local territorial planning initiatives and dedicated funding (i.e., Implementation of the NAS, The Covenant of Mayors initiative)

The MGD dedicated task force will promote the organisation of capacity building events at District and Regional level with the cooperation of the appropriate Stakeholder Boards and relevant competencies.

The consortium foresees a capacity building action at least once in each phase of the project. The focus will be different in each phase, according to project needs and opportunities.

Phase 1: focused on creating a common understanding of the necessary technical and financing tools to implement adaptation measures and support the overall implementation of the NAS (contents of WP2 and 3)

Phase 2: focus on the vertical themes of the project (contents of WP5 to 8)

Phase 3: focus on uptake of new knowledge and good practices, integration of existing planning tools with adaptation measures and strategies, replication opportunities, sustainability of activities in the following years

The contents of this capacity building action will feed into further dissemination activities in WP10.

As to replication activities in WP11, capacity building will continue after the end of the project as part of the overall implementation of the NAS and part of the regular update of river basin planning tools.

Dedicated capacity building actions / sessions will be organised whenever necessary for the implementation of specific project actions or topics and dedicated to specific target groups, such as in the following task 4.6 creating the ground for WP8)

Task 4.6 Capacity building programme for soil management in conservation agriculture (ERSAF, ADBPO, CMCC, UNIBO, POLITO) (M7-24)

This task focuses on the planning of adequate structural support actions for the training of farmers and the development of consultancy services in the agricultural sector to support conservation practices and their effective application, also through the valorization of good practices.

This activity is aimed at designing support activities for the development of technical skills in the application of the principles of conservation management of soils and it is preparatory to the creation of an infrastructure for continuous training, updating and exchange of experiences. This infrastructure should become an operational support tool to foster the effectiveness of communication, training and consultancy initiatives that could be activated using complementary funds (ie. resources of regional RDPs, local projects funded by foundations, etc.).

The activity will be carried out with the collaboration of project partners and university partners, and other technical-scientific organisations with skills in specific areas and / or specialized in the organization of training actions.

Task 4.6.1 Training for dedicated Technical Facilitators (ERSAF)

This sub-task foresees the selection and training of 3 Technical facilitators who will operate, as professionals, to support the implementation of WP8.2.1 and WP8.3, acting in particular as promoters and facilitators for the functional activation of complementary funds and the development of networking activities with interested stakeholders (agricultural organizations and associations, technical assistance centres in agriculture, technical bodies, local institutions and project partners) to support quality planning in the field of soil management.

Facilitators will be selected through specific public calls. The training activity will be organized on an on-job training model and will be aimed at acquiring knowledge and skills relating to:

- strategy and contents of the project and in particular of the actions concerning the issues of soil management and Land Degradation Neutrality;
- mapping of stakeholders and financial tools that can be activated to improve the management of soils and rural areas according to the objectives of adaptation to climate change;
- intervention techniques and tools that can be used in rural areas to improve hydrological regulation and erosion control, increase the efficiency of irrigation systems, develop the ecosystem functions of the soils and ensure the invariance or inversion of the level of degradation of the territory;
- transfer of the information available in the materials and guidelines produced to support NAS implementation

Task 4.7 Capacity building on Water and Adaptation in Metropolitan and Diffuse Urban Centres (ADBPO, SOGESCA, CMBO, UNIBO, POLITO, SMAT, LEGAMBIENTE) (M7-108)

A specific capacity building action will be dedicated to Local Governments and the promotion of the Covenant of Mayors for Climate and Energy, as the adaptation part of the Sustainable Energy and Climate Action Plans is a significant tool to support the overall implementation of the NAS in the PO River Basin District.

Some Regions already have a support mechanism dedicated to Local Governments and a significant number of Municipalities have already signed the Covenant of Mayors. Nevertheless, water management for adaptation is still a complex topic in local planning and needs dedicated effort to be introduced in SECAPs and contribute to implementing the NAS.

In specific, topics that could be addressed at this stage are related to risks-danger / impacts to avoid / actions and related planning tools:

- Extreme heat and heat islands: impacts on public health, biodiversity and environment – green and blue infrastructures, urban vegetation plans
- Hydrogeological risk and floods: defence, infrastructure and people – urban planning tools
- Biological risk: monitoring and prevention to guarantee water quality – Maintenance of water and purification services (infrastructure conservation), agreements with utilities
- Drought and management of water reserves: avoid the rationalization or interruption of the distribution of drinking water – Civil protection plans
- Regurgitation and sewer blockages (due to extreme rainfall): road maintenance
- Integration of SECAPs and plans at the municipal level

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO – NATIONAL FOUND – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation activation and implementation of river, lake, humid area and delta contracts – 6.300.655,00 – Not yet Granted
- ADBPO/AIPO – NRRP – Nationale Recovery and Resilience Plan - Renaturation of the Po River – 178.500.000,00 – Granted (Nat Decree 6 august 2021)
- RER – Reforestation project “Mettiamo radici per il futuro” – 3.250.000,00 – Not yet granted
- RER – ADRIACLIM – 1.474.995,00 € (1.019.100,00+455.895,00) - Granted

Work package WP5 – Water Management

| | | | |
|----------------------------|------------------|-------------------------|------------|
| Work Package Number | WP5 | Lead Beneficiary | 11. POLITO |
| Work Package Name | Water Management | | |
| Start Month | 1 | End Month | 72 |

Objectives

SO4. Improving water security and climate resilience.

Building up the resilience to climate change and variability and improving water security, by means of

- enhancing water retention and storage capacity management, serving multiple purposes;

SO1. Governance of climate adaptation at Po River District Basin level.

Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of

- reforms of water allocation, ecological flow, and reservoir management regimes and practices;

Expected results:

Activities of this WP are in line with the Po River District adaptation strategies: “Taking into account the climate change adaptation scenarios in the management of water resources, at all levels of planning and with reference to the sectors that depend and significantly impact on water resources” and “Organizational strengthening of the bodies in charge of management and control”.

Other specific expected results are:

1. Modeling chains (which can also be used after the end of the project) are implemented for simulating climate scenarios, inflow-outflow processes, and irrigation needs downstream of water lakes
2. Framework of utilities, rights and competing interests for the use of the volumes stored and released by the lakes
3. Operational tools for assessing climate risk, based on the concept of the risk of failure of water supply systems.
4. Collection of best practices that can be extended nationwide
5. Sustainability assessment of water uses in relation to current availability and climate change scenarios
6. Integrated water crisis management plans for Maggiore, Iseo and Como lakes
7. Proposal for an optimal organizational structure for the resolution of current and expected conflicts of use with change scenarios
8. Continuous monitoring and current surveillance system of water turbidity and water quality during flood events and during flushing operations in mountain waters

9. Description of morphological changes (sedimentation and erosion) along the downstream reaches;
10. Assessment of the increased storage volumes available after the flushing operations;
11. Evaluation of the river discharge that allows the natural reworking of the river bed, in agreement with ecosystem preservation
12. Integrated plans for flood attenuation and management of sediments in reservoirs
13. Optimized Guidelines for the environmental compatibility of flushing operation of reservoirs

Description

The focus of this WP is to address the assessment, planning, resilience and sustainable management of water storage capacity of regulated alpine lakes and artificial reservoirs while balancing multiple purposes (e.g., water abstraction for agriculture, domestic uses, energy production, flood control) and environmental protection's needs (e.g. biodiversity and ecosystem habitats, water quality management). In particular, the WP is organized with common initial and final tasks (Tasks 5.1 and 5.4) while the core activities differentiate between two classes of storage: one related to larger and downstream storage (the regulated lakes, Task 5.2) and one related to smaller and upstream storages (the artificial reservoirs, Task 5.3). In detail,

- Task 5.2 focuses on an integrated analysis of the performance and on the management of the stored volumes in natural alpine lakes, with respect to droughts and floods, considering the needs of downstream and upstream users (farmers, hydropower plants, tourists) and environmental objectives, including ecological flows.

- Task 5.3 focuses on operational procedures, cost-benefit/effectiveness analysis, stress tests, multi-purpose management, environmental retrofitting of engineered structures such as dams and levees to improve the sustainable management of sediments and preserve downstream water quality

The WP activities are organized in the following Tasks.

Task 5.1 – Collection of existing data and knowledge

This task is dedicated to a set of preliminary analyses, which include data collection, model setup, laws/regulations analysis and technical documents survey. These activities will guarantee that the project activities will be based on partners' know-how and on available documentation.

Task 5.1.1. Data collection and initial analysis on integrated management of the great Alpine lakes (ADBPO, ARPAP, ARPALO, POLITO) (months 1-12)

Collection of historical data of meteo-hydrological variables, analysis of available meteo-climatic, hydrological, hydraulic, and agronomic models applied to the study area, collection of documents about the management and regulation of lakes, about water requirements and use, about best practices for integrated water management, with particular reference to the hydropower and irrigation sectors.

The results of this task will feed into task 5.2

Task 5.1.2. Data collection and initial analysis on sediment management in artificial reservoirs (POLITO, ADBPO) (months 1-18)

Collection of historical data relating to the hydrological regime, aerial images describing the evolution of the sections subject to flushing operations, solid transport data in suspension in the sections underlying the reservoirs considered. Hydrological and morphological characterization of the stretches subtended by the reservoirs.

The results of this task will feed into task 5.3

Task 5.2 – Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) (ADBPO, POLITO, CMCC, AIPO, RPiemonte, RLombardia, RER) (month 7-54)

The natural lakes Maggiore, Como, Iseo, Idro and Garda are equipped with infrastructures for the outflow regulation, with the aim of storing water in periods of abundance and releasing it in periods of shortage. The focus of this task is the optimal management of water accumulated in lakes, considering current and future conditions of water availability and of water demand for different uses, including the need to protect ecosystems in the water bodies downstream of the lakes. The aim of the task is to develop quantitative indicators, modeling chains and management strategies to face the challenges posed by climate change and by the competing needs for the use of water.

ADBPO will have strategic guidance on large-scale planning, technical support for development and application of models, connection with main actors, stakeholders and lake water managers;

POLITO will be task coordination, scientific and methodological support, hydrological modeling and irrigation requirements;

CMCC will provide scientific and methodological support, elaboration of scenarios in relation to climate change and other development[at1] drivers to delineate future trends of water uses, evaluation of alternative management strategies and sustainability indicators of water exploitation;

AIPO, RPiemonte, RLombardia, RER will provide strategic and political support for the management and implementation of strategies

ARPAP, ARPALO will lead hydrological modeling, scientific and methodological support

Task 5.2.1. Hydrological modelling of lake/reservoir inflows (ADBPO ARPAP, ARPALO, POLITO) (months 7-24)
 Collection of specific data to support hydrological modelling, including land (elevation, use, soil) and meteorological variables (temperatures, precipitation). Analysis of available and state-of-the-art modelling tools for the assessment of water resources availability as a function of the meteorological drivers. Selection of the hydrological model to be applied to the catchment area of the lakes and model setup. Predisposizione della catena modellistica e strumenti di calcolo: i modelli climatici, idrologici, idraulici, agronomici ritenuti utili, omogeneizzati e completati, verranno integrati in un'unica piattaforma. Calibration on the available information and on the basis of past hydro-meteorological data. The estimates will also be complemented with simulations of the anthropic modifications due to upstream reservoir operation.

Task 5.2.2. Water requirements and criticalities (RPiemonte, RLombardia, RER, ADBPo, POLITO) (M 13-36)
 For the different uses of water, the available information will be organized and integrated with the necessary information, relating to civil/industrial use, hydroelectric use, irrigation use, use for ecological functions and ecosystem services, other uses. Data on water withdrawal and release, data relating to the spatialization of crops, agricultural and irrigation practices, concession rates, resident population and economic activities served will be collected. The most suitable hydraulic and agronomic models will be chosen for the assessment of water needs, enhancing tools already developed by partners or other qualified subjects. The modelling chains will be prepared, integrating the upstream and downstream availability and needs of the great lakes. The data collected in Task 5.1.1 will be capitalized and any additional data necessary for the simulations will be collected. The calibration of the aforementioned models will also be provided. Specific research will be conducted on water crises and technical criticalities that occurred in the past, also in relation to hydroelectric use upstream of the lakes, drought events and problems related to other needs, to highlight the vulnerabilities of the various sectors.

Task 5.2.3. Definition of future scenarios and multi-sector dynamics (CMCC, ARPAP, ARPALO, ADBPO) (M16-36)
 Framing future scenarios, quantifying the relevant future climate forcing for hydrological processes and water uses in agriculture (link with WP3), land use trends, agriculture and crop distribution, socio-economic development and trends of relevant sectors competing for water resources,.. The main water needs for the competing sectors (irrigation, hydroelectric, domestic) will be assessed for different time horizons and dynamically declined to take into account the space-time variability of hydroclimatic forcings, together with management scenarios and options to mitigate water use conflicts among sectors within a Nexus framework. Expected critical condition based on climate projections, such as pronounced drought periods, and co-occurrent enhanced water needs from competing sectors will be identified for risk assessment (task 5.2.4), under which optimal management and operational practices may be required and tested (task 5.4.1) to overcome critical risks of water supply failures and optimize availability for essential services with higher priorities.

Task 5.2.4. Risk assessment and failure indicators (ADBPO, POLITO, CMCC) (Mesi 37-54)
 Methodological definition of the risk of failure of water supply systems and choice of modeling and operational tools suitable for achieving the objectives. Definition of the approach based on the risk of failure (or non-satisfaction) of the water supply systems according to attachment 1.6 to the DPCM of 04/03/1996 "Provisions on water resources", integrating the risk of non-achievement of the objectives Environmental aspects of the WFD, with respect to Ecological Outflows, and the objectives of Climate Adaptation. The assessment will integrate flood risks and risks to the tourism, navigation and fishing sectors. The needs obtained will be compared with the availability of water. The approach based on the risk of failure will be implemented throughout the area, comparing the level of exposure of irrigated areas, other users, and riparian areas. The results of the simulations will be analyzed, identifying significant forms of restitution with respect to the objectives and communicative for partners, stakeholders and policymakers, based on statistical tools (confidence intervals, uncertainty), cost-benefit and cost-effectiveness analyses, tools from Water- Energy-Food-Ecosystems nexus (<https://wefnexusindex.org/>). Gaps, pros and cons will be identified for each scenario. The results of the risk analysis will allow assessments of environmental and socio-economic sustainability of water uses, and the production of strategic guidelines for the improvement of the water distribution system and the revision of the use concessions.

Task 5.3 – Sustainable sediment management in artificial reservoirs and preservation of downstream hydro-morphology and environmental quality (POLITO, ADBPO, ARPAP) (Months 19-60)
 This action aims at developing a Plan for the Restoration of Reservoir Volumes, containing indications for the movement downstream of the sediments accumulated, through flushing operations that minimize the environmental impact and define compensatory measures for the impacts produced. In a scenario of changing climatic conditions, the restoration of reservoir volumes and the monitoring of the downstream fluvial environment is advantageous for several reasons, including:

- a greater modulation capacity of the reservoir volume to produce renewable energy;
- an increase of water resources available in case of drought;

- the greater possibility of flood attenuation;
- use of existing structures instead of building new barriers;
- reduced risk of blockage in the release facilities;
- management and reduction of bed degradation, armouring, bank erosion and bridge scour in the downstream reach;
- improvement of the esthetical and touristic value of mountain environments and artificial reservoirs, with particular attention to banklines and the artificial lake;
- to avoid mechanical removal of sediment, and the consequent CO₂ emissions related to mass mobilization.

On the other hand, if not properly planned and managed, dam flushing operations may induce a loss in ecosystem services, through a loss in: (i) the habitat availability for aquatic life; (ii) biodiversity in the river corridor; (iii) water quality; and (iv) aesthetic and touristic value.

The action, carried out in concert with the managers and regulators of water resources on a basin scale, has the aim of coordinating a set of innovative measures (concerning both monitoring as well as modelling) able to establish guidelines for minimizing the impact of these operations throughout the Alps. The action envisages defining the methods of sediment mobilization through: i) pulsed flushing to be carried out during ordinary flood events; ii) continuous monitoring of turbidity and water quality; iii) tailoring of a water-sediment hydrogram that limits the alterations of the aquatic habitat and enables the possibility of temporary displacement of fish fauna and repopulation.

Furthermore, the action addresses to develop protocols and guidelines suited to replicate a recovery methodology for the reservoir volumes defined in other territorial contexts of the Alpine region.

Based on the indications of the managing agencies, the following reservoirs were selected as suitable candidates for the planning, management and monitoring of the flushing operations and their effects downstream:

- Invaso di Rimasco (Province of Vercelli)
- Invaso di Roccasparvera (Province of Cuneo)

These reservoirs were chosen since the downstream watercourses are representative of the morphologies of typical alpine confined streams, according standard indication river morphology, the sediments features and of the ecological communities present (fish fauna, macroinvertebrates, particular aquatic species protected and mentioned in the Habitat Directive - Directive n. 92/43 / EEC). The Roccasparvera reservoir was also chosen due to the historical management problems related to the total flushing of sediments from the basin. For each stretch subtended by the reservoirs, an appropriate number of hydro-morphologically homogeneous river reaches will be selected. For each reach detailed monitoring will involve: hydraulic and morphodynamic modelling, repeated sediment sampling, continuous measurement of suspended load, and habitat monitoring. The aim is therefore to assess the eco-hydro-morphological changes induced by flushing operations and the definition of the key indicators that allow for cost-efficient and environmentally acceptable choices about timing and magnitudes of the release.

POLITO: coordination of the action, hydrological and morphological characterization of the watercourses downstream the reservoirs, design and set-up of measurement stations for suspended solid transport, hydraulic modelling and solid transport, generation of management scenarios;

ARPAP: Collection of historical hydrological and morphological data, quantification of sediment management benefits, support for the drafting of a programmatic document regarding water availability, technical support to sub-actions;

ADBPO: Coordination, to address the district planning and management, technical support to sub-actions

RPiemonte: Responsible of the implementation of technical guidelines

Task 5.3.1. Continuous Measurements of sediment load and water quality (ARPAP, POLITO) (months 6-36)

Design and setup of turbidity (nephelometric units) and water quality measurement stations (conductivity, temperature) downstream of the considered reservoirs. The measurement stations will operate continuously with the use of highly innovative sensors. To date, in Italy there are only two measurement stations for suspended solid transport with these characteristics.

Task 5.3.2. Hydro-morphological modeling (POLITO, ARPAP) (months 13-36)

River survey and DTM generation. Hydraulic and morphodynamic modeling (through advanced 2D software) for the description and analysis of the suspended transport and hydro-morphological alterations downstream of the sediment release, under different management and operative scenarios. Identification of potential critical regions for scour and sedimentation. Identification of the discharge threshold that triggers the washing of the landforms newly generated from dam flushing. Identification of the formative discharge. Evaluation of the efficiency of the pulsating-flushing. This task will feed task 5.

Task 5.3.3. Evaluation of meso-habitat (POLITO, ARPAP) (months 13-36)

The availability of habitats for aquatic fauna and their modification due to flushing operations (fish + macroinvertebrates) will be quantified following the MesoHABSIM approach (mesoscale habitat simulation model), by referring to in the ISPRA MLG 154/2017 manual.

Task 5.3.4. Regulatory Review Process (RPiemonte, ADBPO) (months 37-48)

Quantification of the management benefits of the stored water resource from the recovery of the reservoir capacity. These methodological aspects will be integrated into the regulatory review process concerning criteria about the reservoir

management project by the concessionaire. In addition, the definition of different management approaches, due to the recovery of capacity, will be considered for the application of Water Protection Plans for the regions belonging to the Po River Hydrographic District.

Task 5.4 - Planning Guidelines and Policy Recommendations (ADBPO, RPiemonte, RLombardia, RER, POLITICO, CMCC) (months 49-72)

Task 5.4.1. Management and implementation strategies (ADBPO, RPiemonte, RLombardia, RER) (months 49-72)

The results of the simulations will be used to define management strategies that allow to increase managerial flexibility and overcome the current approach based on constant flow rates over time.

The governance structure of the regulation will be analyzed, highlighting the obstacles to integrated management, and an innovative proposal for a management structure, structural and agronomic, of priority of the different uses, which leads to management simplification and conflict resolution, to a greater hydraulic and environmental security towards climate adaptation. The proposal will integrate the flood reduction plans, referred to in the Civil Protection Directive of 27/02/2004.

Definition of agreements for the integrated management of the lake resource, to maximize the services to the various sectors while minimizing the vulnerability to climate change based on the results of the previous phases.

Final assessment of consistency between the current regulatory instruments and the proposals identified during the project; assessment of coherence with respect to: climate adaptation objectives; SDG 2030; Green Deal; indications of Disaster Risk Management.

Task 5.4.2. Water Storage Plan in the NAS perspective (RPiemonte, ADBPO, POLITICO) (months 49-72)

According to the ADBPO water balance plan, and by considering the National Adaptation Strategy (NAS), a programmatic document will be drawn up about the water availability for various uses. Based on different scenarios for water resources availability this document:

- a) will identify sub-basins with naturally-limited resource availability, and characterized by a negative balance of the water balance, due to a water demand that can not be reduced through water-saving policies and rationalization of withdrawals;
- b) will carry out a survey of the current capacity of the reservoirs, taking into account the sedimentation rate and possible malfunctioning of the release facilities;
- c) will carry out a survey of the new planned reservoir capacities and foreseen uses;
- d) will identify potential areas where to plan further reservoirs.

The replication potential of these pilot actions in the river basin must be differentiated between Task 5.2 and Task 5.3. Task 5.2 considers the quasi-unique cases of the greatest and most downstream lakes in the Po river basin. Quantitative results will therefore be linked to the considered cases, while the replication potential includes the modelling approach and the management strategies proposed to face the effects of climate change in similar cases (other great-to-medium sizes downstream lakes). Task 5.3, instead, considers pilot cases and the main potential replications of these pilot actions in the river basin are related to the generalization of the following outcomes:

1. Advanced tools for continuous monitoring of the effects of flushing operations on (i) water quality, (ii) usual transport regime and (iii) aquatic fauna.
2. Advanced modelling tools for (i) the assessment of the length of river reach to be monitored, (ii) the prediction of the short and long-term effects of flushing operations, both on the river ecosystem and on the hydro-morphology of the watercourse.
3. Guidelines for minimizing the impacts on aquatic fauna or particular protected aquatic species, mentioned in the Habitats Directive - Directive no. 92/43/ CEE.

The target areas of the action will be the artificial reservoirs within the district which currently have management problems due to landfills and are upstream to waterways whose morphological typology is attributable to those selected as "Reference Areas".

The relevance of the pilot actions of this WP for non-water related issues is the definition of adaptation strategies to CC for agriculture and hydropower production, support for the quantification of the economic impact of CC on agricultural & energy production, the definition of operational rules of lakes and impact on lake tourism and sport activities.

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO/AIPO - NRRP – National Recovery and Resilience Plan – Renaturation of the Po River (178.500.000,00 € – Granted (Nat. Decree 6 august 2021))

- RP – Policy Objective 2 Action II.2iv.5 – Interventions to increase the resilience of river territories to climate change (25.763.000,00 € - Not yet granted)
- ADBPO – National Cohesion and Development Fund (FSC 2021-2025) – L2 Bilancio idrico (250.000,00 € - Granted on 2021 till 2025)
- ADBPO – National funds – National budget- Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use – Implementation and/or system enhancement of water accounting (2.000.000,00 € - Not yet granted)
- RP – Regional Funds that derive from proceeds of the fees for public water use implement the WBMP measures (3.000.000,00 € - Granted (2022-2023))
- RER – ERDF/ Regional Operational Programme 2021-2027- Regional Operational – Programme/ European Regional Development Fund (POR-FESR) (23.321.678,00 € - Not yet granted)
- RER – EAFRD/ Rural Development Plan 2021-2022 – European Agricultural Fund for Rural Development (PSR-FEASR) (20.515.880,00 € - Not yet granted)
- RER – EAFRD/ Rural Development Plan 2023-2027 – European Agricultural Fund for Rural Development (PSR-FEASR) – To be confirmed
- RP – EAFRD 2014-2020 (2022) – Measures 4.4.1 (Elementi naturaliformi dell’agroecosistema) (1.190.000,00 € - Granted (2022-2023))
- AIPO – LIFE19-ENV_IT_000071 – Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River (1.552.062,00 € - Granted on 2020 till 2025)
- AIPO – CEF 2014-2020 transport Call for proposals 2020 MAP – Action 2020- IT-TM-0034-SWIN-IT: Works for Implementing the Navigation in Northern Italy (1.365.000,00 € - Will be granted on Dec 2021 till Dec 2024)
- ADBPO - 1 National budget - Verification of stability and resistance of the Po river embankments (6.000.000,00 € - Not yet granted)
- ADBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis (10.000.000,00 € - Not yet granted)
- RL – Regional Funds to implement flood directive measures - flood risk mitigation and prevention and Green infrastructures for water body (T6.3 "Lambro Selvaggio") (1.680.000,00 – Granted (Reg. Law 9/2020 on economic))
- RL - Regional Funds to implement flood directive measures – Flood risk mitigation and prevention (124.207.143,50 € - Granted (Reg. Law 9/2020 on economic))
- RL – National Funds – National agreement - National budget – flood risk mitigation and prevention (21.634.017,60 € - Granted)
- RL – National Funds - National budget – flood risk mitigation and prevention (6.050.000,00 € - Not yet granted)
- AIPO – LIFE19-ENV_IT_000071 - Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River (1.279.871,00 € - Granted on 2020 till 2025)
- RER – Interreg GECO2 (438.720,00 € - Granted)

Work package WP6 – Nature and Ecosystem-based solutions

| | | | |
|----------------------------|--------------------------------------|-------------------------|---------|
| Work Package Number | WP6 | Lead Beneficiary | 7. CMCC |
| Work Package Name | Nature and Ecosystem-based solutions | | |
| Start Month | 1 | End Month | 72 |

Objectives

SO4. Improving water security and climate resilience.

Building up the resilience to climate change and variability and improving water security, by means of:

- promoting nature/ecosystem-based solutions and restoration of connectivity of green and blue infrastructures;
- demonstrating the performance of ecosystem-based approaches in comparison to conventional “grey” measures

SO1. Governance of climate adaptation at Po River District Basin level.

Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:

- reforms of water allocation, ecological flow, and reservoir management regimes and practices;

Expected results:

The Work Package 6 “Nature and Ecosystem-based solutions” focuses on nature/ecosystem-based solutions to flood risk and connectivity of green infrastructures through peripheral woodland and fluvial buffer strips and mainstreaming green adaptation in the Perifluvial Vegetation Management Plans, following an Integrated Risk Management Approach.

Task 6.1 - Nature-based solutions for riparian area management

Incorporating the experiences underway in the territory of the Piedmont Region and the Metropolitan City of Turin, the action aims to identify the best practices for the realization of redevelopment interventions on the peripheral vegetation belts. These interventions are commonly carried out with the specific objectives of mitigating the hydraulic risk, requalifying the perfluvial wooded belts, creating buffer belts, reconnecting the ecological networks, and increasing ecosystem services. The Task will provide a peripheral vegetation guideline: a final report will be drawn up summarizing the findings acquired during the action. The report will describe the guidelines for excellent interventions for the creation of buffer strips and will identify indications for updating the existing planning tools (eg: Perfluvial Vegetation Management Plans). The report will also indicate the possible evolution trends of riparian vegetation and related ecosystem services examined deriving from expected climate changes. The document provides information on updating existing operational tools (e.g. Perfluvial Vegetation Management Plans) with a view to Integrated Disaster Risk Management

Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin

The action aims to support and inform large-scale land management to improve environmental quality, the ecological network and the provision of existing ecosystem services through the implementation, conservation and reconnection of green infrastructures. The action will develop a methodology for the evaluation and identification of priority ecosystem services, based on the ecosystems and economic sectors present in the area. This Task will provide the following results:

- ES evaluation methodology to identify the priority ones for the territory, considering the present socio-economic context;
- List of case studies of NBS representative of the territory, which include different types of measures and provide the priority ES identified;
- Map and assessment of the connectivity status of the green infrastructure network within the Po district territory.

Task 6.3 Emblematic intervention for adaptation to climate change: Wild Lambro (Lambro Selvaggio) (Monza-Melegnano, Lombardia Region).

The action pursues several objectives: increase of the space available for the Northern Lambro River through the restoration of the longitudinal and transverse continuity of the watercourse from Monza to Melegnano; increase of adaptation capacities to climate change in the south-east area of Milan; morphological and ecological improvement of the Northern Lambro river through the riparian vegetation restoration; possibility of use by the citizens of a large portion of the territory; contribute to the reduction of the hydraulic-morphological risk.

Description

Ecosystem approaches, such as nature-based solutions (NBS) and green infrastructures (GI), have acquired greater relevance within European and international policies and strategies as an alternative response to climate change, environmental and socio-economic activities in progress (Faivre et al., 2017). These solutions are based on the simultaneous provision of multiple benefits for the well-being of the population, generally expressed in terms of ecosystem services (ES). In conditions of climate change, the maintenance and conservation of NBS and SE are considered valid solutions for the improvement of adaptation strategies.

Task 6.1 - Nature-based solutions for riparian area management (POLITO, ADBPO; M1-M72)

The action is aimed at identifying the best practices for the realization of redevelopment interventions on the peripheral vegetation belts, incorporating the experiences underway in the territory of the Piedmont Region and the Metropolitan City of Turin. The interventions for the construction or restoration of vegetated perfluvial belts are commonly carried out with the specific objectives of mitigating the hydraulic risk, requalifying the perfluvial wood belts, creating buffer belts, reconnecting the ecological networks, and increasing ecosystem services. Vegetated buffer zones represent nature-based solutions whose implementation is encouraged by the European Commission. Even though the general benefits of restoring these vegetated zones are widely recognised, the actual effectiveness of a restoration action is uncertain as it depends on multiple site-specific factors. Therefore, a comparison of different case studies is necessary to identify the potential restoration cases with the highest probability of success. Moreover, the restoration design should account for changing climate conditions, because the expected variations of the hydrological and meteorological forcings can affect riparian vegetation and hamper the effectiveness of restoration actions. The Task activities are hence also aimed at providing knowledge for the updating of existing planning tools (e.g. Piani di Gestione della Vegetazione Perfluviale) through an Integrated Disaster Risk Management approach.

Riparian field sites will be chosen along Piedmont rivers to identify the most effective restoration projects. Sites will be chosen among existing river restoration projects (planned by Piedmont Region) and among recent studies of sediment management (planned by the Metropolitan City of Turin) according to the following criteria: (a) representativity of different river morphologies; (b) degree of anthropic impact; (c) occurrence of previous failures caused (at least partially) by erroneous choice and management of riparian vegetation; (d) sensitivity to climate change effects, according to the climatic risk index proposed in WP3; (e) occurrence of previous extreme events – representative of the expected climatic alterations – that significantly impacted the existing riparian vegetation. After a review of the studies in the technical

and scientific literature, a protocol will be defined to characterize riparian vegetation and the related ecosystem services. The protocol will specifically focus on:

- removal of contaminants through self-depuration processes. The considered contaminants will include those deriving from diffuses sources and transported either as solutes in groundwater (e.g., nitrate) or in particulate form through surface runoff during rain events;
- hydraulic risk modifications, including both positive interactions (e.g., improved bank stability, maintenance of flow capacity of the river cross-section) and negative impacts (e.g., increase of hydraulic roughness and flow resistance);
- restoration of heterogenous river morphologies to improve habitat availability;
- development of riparian vegetation with high net primary production, which provide high potential for carbon storage.

Additionally, pre-existing available information on the temporal evolution of the chosen field sites will be collected. These information will derive both from routine monitoring reports (e.g. Piano di Tutela delle Acque) and from indirect observations (e.g. remotely sensed images to assess the extent of riparian vegetation). The collected data will be examined according to the previous protocol to quantitatively assess the ecosystem services provided by riparian vegetation.

Field observations will be collected in the chosen field sites in order (a) to obtain a DTM describing river morphology for the following modelling activities; (b) to quantify the removal of contaminants transported to the river by surface runoff and subsurface flow; (c) to assess the potential for carbon storage of riparian vegetation. The field activities will include: installation of piezometers in perfluvial areas; periodic collection of subsurface water samples from the piezometers; deployment of automatic samplers for collecting samples from surface runoff; topographic and sedimentologic measurements for the following numerical modelling activities; estimation of allometric scaling laws for riparian vegetation. All data will be collected according to the protocol and will be integrated with the pre-existing available information described above.

Hydraulic models of the chosen field sites will be developed to assess the effect of riparian vegetation on hydraulic risk. Numerical simulations will be performed to compare scenarios with different abundance of riparian vegetation to quantify its benefits for bank stability and its influence on flooding risk. Moreover, eco-hydraulic models will be applied to describe the interactions between river flow and riparian vegetation. The modelling activities will include: application of hydrodynamic 2D software in steady and unsteady flow to estimate flow depth and velocity and the resulting destabilizing forces on river banks and cross-section during flood events; application of numerical algorithms describing vegetation growth and uprooting as a function of the morphologic and hydrologic properties of the selected field sites, including the effects of hydrologic alterations due to climate change.

The quantitative information deriving from field sampling and numerical modelling will be analysed to classify the effectiveness of the restoration actions at the chosen field sites in terms ecosystem benefits (contaminant removal, hydraulic risk and carbon storage). The results on the assessed ecosystem services will be shared and integrated with those stemming from task 6.2.

Task 6.2 - Priority ecosystem services and green infrastructure network in the Po River Basin (CMCC, ADBPO) (M13-M48)

The task aims to support and inform large-scale land management to improve environmental quality, the ecological network, and the provision of existing ecosystem services through the implementation, conservation and reconnection of green infrastructures.

The task will include a screening of ecosystems and ecosystem services within the low-laying area of Po River Basin District, and an inventory of existing green infrastructures with sizeable contribution to mitigating climate extremes (e.g. forested infiltration areas, floodplain and wetlands, water retention ponds, vegetated buffer strips). The analysis should include different examples of measures, representative of various ecosystem types, services provided and distributed across the entire territory. The identified green infrastructures will be consulted with stakeholders to integrate the analysis with local knowledge, collect more information on specific areas, measures and needs. The process will help to finally approve the green infrastructure examples for further analysis.

The stocktaking will be complemented by desk review of the methods and studies for valuation of ecosystem services, according to their environmental, economic and social value. This would include both on theoretical framework (e.g. TEV and IPBES framework - OECD, 2006; Pascual et al., 2017) and spatial models and tools, addressing both economic, ecological and biophysical assessment.

For a subset of green infrastructures with significant impact, a detail assessment of primary ecosystem services will be completed. By using available models, the task will assess the contribution of these measures in reducing climate-related risks, especially related to water quantity. Flood hazard models (e.g. Safer_RAIN, Samela et al., 2020) can be used to assess the role of green infrastructure to reduce water depth by increasing infiltration capacity of the soil, and hydrological models that analyse the changes in the minimum water flow and flow duration curve (e.g. Cassani et al., 2009) in rivers can be used to assess the impacts of nature-based measures on water availability for agriculture or other uses.

These examples will be finally used to upscale the analysis and investigate potential green infrastructure network improvement. The analysis will consider all potential areas where green infrastructures could be implemented, according to the elements and criteria collected in the stocktaking and assessment phase, as elements of green network. Criteria

can include distances, connectivity, land use/land cover, green areas available and areas that can be converted to green. Following a green infrastructure network framework (Staccione et al., 2022), the task will perform a network analysis, that combines morphological spatial pattern analysis (Soille and Vogt, 2009) and landscape connectivity indexes, as the Integral Index of Connectivity (Pascual-Hortal and Saura, 2006), to map core areas and connection elements, and assess connectivity status. Connectivity analysis provides information on the most important areas and connections helping to define the areas that should be preserved to maintain the network and the areas that need a connectivity improvement and where future interventions should be prioritise. The task will investigate different scenarios of network improvement by adding potential core areas and connections, based on distances and criteria previously defined. Potential network improvement would also considering also climate-associated risks existing in the area, in order to plan solutions that help to reduce the identified risks and improve future adaptation. As performed for the existing conditions, connectivity and impacts for water-related risks assessment of the new network configuration will be finally computed to analyse potential changes.

Task 6.3 Emblematic intervention for adaptation to climate change: Wild Lambro (Lambro Selvaggio) (Monza-Melegnano, Lombardia Region) (ERSAF, RLombardia, AIPO, ADBPO; M1-M72) Task 6.3 implements one of the actions envisaged by the feasibility study "Integrated redevelopment of the Lambro River" (2021) that the Lombardy Region - in collaboration with ERSAF, AIPO and the Municipality of Milan - has developed with the aim of defining a structure of the Lambro River compliant to the new requirements imposed by climate change and in the direction of implementing the SNAC. The study defines at a preliminary level, both for the river bed and for the riparian areas and the alluvial plain, a structure that is going to be verified from the hydraulic point of view with an appropriate simulation conducted by professionals already in charge. This intervention can therefore rely on up-to-date and accurate investigations along the stretch of the river between Monza and Melegnano (under the "Northern Lambro River Contract" Framework Agreement for Territorial Development), and on site-specific guidelines to support the planning of individual interventions proposed. All that in in the overall perspective of defining a new scenario in which the River will be given more room to accommodate floods, while maintaining the protection of sensitive areas.

Among the interventions envisaged by the aforementioned study, task 6.3 foresees the implementation of the intervention called "Lambro Selvaggio" (Wild Lamber) which aims to eliminate pre-existing and unjustified bank defences, restoring a fairly wide area where the river can evolve - even by moving significantly the meanders - and overflow. Ad hoc protection is guaranteed to risk elements where present (mainly farmhouses) and at the same time a considerable and as continuous as possible strip of riparian vegetation of native species will be created along the river, with the function of an ecological corridor. It is also planned to activate a monitoring and alert system, that can be used as well as a financial compensation instrument to the subjects who may be impacted by the flooding events. The intervention also aims at reconciling with the River that part of the citizens in search of green spaces. To this end, it will be essential to activate a process for the involvement of stakeholders, by sharing the planning and implementation phases. This step will be crucial for the community to recognize the project as an innovative practice of adaptation to climate change and to identify it as a means of promoting a new way of integrated and sustainable use of the Lambro river. This will also enhance the attention and the defence action of people towards the river, recognizing this way its good ecological potential and therefore contributing, even if in the medium-long term, to the improvement of water quality required by the Water Framework Directive 2000/60/EC. and its implementation at national level (Legislative Decree 152/06).

For what concerns the specific roles: ERSAF: coordinates the activities and the sharing process with stakeholders; takes care of the design and realization of the vegetation interventions. Lombardy Region: co-finances the intervention and coordinates the compatibility with the planning and strategic tools of the regional level and assumes the guidelines that will emerge from the activity. Promotes River Contracts processes. AIPO: takes care of the design and realization of works; AdBPO: acquires the results of the study to update the structure of the sub-basin

The main expected outcomes are: Longitudinal connection: removal of interruptions and kilometres of reconnected sections. Transversal connection: removal / lowering of protection with consequent possibility of expansion, square kilometres of floodplain areas regained. Accessibility for fruition/recreation: linear sections of reconstituted cycle-pedestrian path, sections of fences / boundaries / walls removed or lowered and / or passages reconstituted for both physical and visual access. Hydraulic critical issues: number and type of hydraulic problems solved (overflowing and flooding). Ecological quality: number and type of trees and shrubs planted for the redevelopment of banks / floodplains. Involvement / participation in the process and complexity of the map of stakeholders: number and type of subjects involved (associations, citizens, institutions, etc...). Educational opportunities and promotion of the intervention: guided tours, installation of explanatory panels, visibility of the intervention on websites and social networks

Task 6.4 - Comparison of the ecosystem-based approaches vs "grey" measures with guidelines and policy recommendations (CMCC, POLITO, ERSAF, RLombardia, AIPO, ADBPO) (M49-M72)

Following the work in task 6.1, 6.2 and 6.3 a report will be elaborated on the comparison of performances obtained/potentially obtained by nature-based solutions and the ecosystem services compared to conventional "grey" measures. The comparison between the two approaches will be carried out based on the definition of best practices for the implementation of redevelopment interventions of the peripheral vegetation strips and the predisposition to peripheral vegetation guideline, as well as exploiting the methodology developed to identify the priority ecosystem services.

The results of this Task and of the Work Package in general will support the definition of management strategies that allow to attribute the correct value to nature and ecosystem-based solutions in a highly man-made territory and increasingly subject to the effects of climate change. They will also allow to acquire a willing knowledge base to support the Water Management Plan drawn up in implementation of the Water Framework Directive.

This will feed into WP2 policy recommendations, WP9 monitoring and evaluation and WP11 replication

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO/AIPO – NRPP – National Recovery and Resilience Plan – Renaturation of the Po River (178.500.000,00 € - Granted (Nat. Decree 6 august 2021))
- RER - ERDF/ Regional Operational Programme 2021-2027 – European Regional Development Fund (POR-FESR) (23.321.678,00 € - Not yet granted)
- RER – EAFRD/ Rural Development Plan 2021-2022 – European Agricultural Fund for Rural Development (PSR-FEASR) (20.515.880,00 € - Not yet granted)
- RER – EAFRD/ Rural Development Plan 2023-2027 – European Agricultural Fund for Rural Development (PSR-FEASR) – To be confirmed
- RP – EAFRD 2014-2020 (2022) Measures 4.4.1 (Elementi naturaliformi dell’agroecosistema) (1.190.000,00 € - Granted (2022-2023))
- RP – ERDF 2021-2027 – Policy Objective 2 Action II.2iv.5 – Interventions to increase the resilience of river territories to climate change (25.763.000,00 € - Not yet granted)
- AIPO – Action 2020- -IT-TM-0034-SWIN-IT: Works for Implementing the Navigation in Northern Italy (1.365.000,00 € – Will be granted on Dec 2021 till Dec 2024)
- ADBPO - National Cohesion and Development Fund – L1 Monitoraggio a supporto dell’attuazione della Direttiva 2000/60/CE (2.128.024,00 € - Granted on 2021 till 2025)
- ADBPO - National Cohesion and Development Fund – L2 Bilancio idrico (250.000,00 € - Granted on 2021 till 2025)
- ADBPO – National Cohesion and Development Fund – L3 Acque sotterranee (650.000,00 € - Granted on 2021 till 2025)
- ADBPO – 1 National budget - Verification of stability and resistance of the Po river embankments (6.000.000,00 € - Not yet granted)
- RP - Regional Funds that derive from the proceeds of the fees for public water use to implement the WBMP measures – Green infrastructures for water bodies (2.800.000 € - Granted (2021-2023))
- RP - Regional Funds that derive from the proceeds of the fees for public water use to implement the WBMP measures – Green infrastructure for water bodies (3.000.000,00 € - Granted (2022-2023))
- RL - Regional Funds to implement flood directive measures – Flood risk mitigation and prevention and Green infrastructure for water body (T6.3 “Lambro Selvaggio”) (1.680.000,00 € - Granted (Reg Law 9/2020 on economic))
- RL – Regional Funds to implement flood directive measures – Flood risk mitigation and prevention (124.207.143,50 € - Granted (Reg Law 9/2020 on economic))
- RL – National Funds – National agreement – National budget – flood risk mitigation and prevention (21.634.017,60 € - Granted)
- RL – National Funds – National budget – flood risk mitigation and prevention (6.050.000,00 € - Not yet granted)
- AIPO – LIFE19-ENV_IT_000071 – Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River (1.552.062,0 € - Granted on 2020 till 2025)
- AIPO – CEF 2014-2020 transport Calls for proposal 2020 MAP - Action 2020-IT-TM-0034-SWIN-IT: Works for Implementing the Navigation in Northern Italy (1.365.000,00 € - Granted).

Work package WP7 – Defence and Water Infrastructure

| | | | |
|----------------------------|----------------------------------|-------------------------|---------|
| Work Package Number | WP7 | Lead Beneficiary | 7. CMCC |
| Work Package Name | Defence and Water Infrastructure | | |
| Start Month | 1 | End Month | 72 |

Objectives

SO4. Improving water security and climate resilience. Building up the resilience to climate change and variability and improving water security, by means of:

- a) enhancing water retention and storage capacity management, serving multiple purposes;
- b) promoting nature/ecosystem-based solutions and restoration of connectivity of green and blue infrastructures;
- d) retrofitting or otherwise amending and extending critical water infrastructure;
- e) demonstrating the performance of ecosystem-based approaches in comparison to conventional “grey” measures.

SO1. Governance of climate adaptation at Po River District Basin level. Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:

- f) mainstreaming of nature/ecosystem-based adaptation into sectoral policies;

SO3. Building capacity and awareness. Accelerating climate adaptation through education, training and public awareness, by:

- c) building up public awareness and perception of climate risk, hence the culture of risk coping.

Expected results:

The Work Package 7 “Defence and Water Infrastructure” is aimed at showcasing good practice examples adapted on specific areas of the District. Such actions primarily refer to address the “focal thematic area” related to deal with “the increased extreme convective precipitation events and ensuing floods and other hazards”; WP is structured in three main tasks:

Task 7.1 Risk planning and real-time management of critical events generated by storms (small basins in Emilia-Romagna; urban and peri-urban areas of the cities of Turin, Bologna and other cities in Emilia-Romagna and Lombardy). The task has the goal to investigate innovative ways to improve rainfall monitoring capabilities, integrating all available information and measures such as rain gauges, radars and estimates obtained from the backhaul layer of the cellular communication network, and to use methodologies and warning tools in an integrated way to extend as much as possible the risk perception ahead of time to reduce fatalities and flood losses as much as possible. The short response times to this type of event also make it essential to improve forecasting techniques by extending observations with seamless forecasting and modelling systems. These must then be integrated with the appropriate hydrological / hydraulic modeling to allow effective risk assessment and management.

Task 7.2 Coastal alert system for extreme water events to adapt to climate change (North Adriatic Coast). The task will integrate the components of the observation and forecasting systems into the existing operational modelling systems available and will therefore make available the results to the Civil Protection and the competent regional offices (all involved as Regions are partners or have sent letters of support). The additions of the existing forecasting systems with the new model implementations will improve the prediction of extreme events such as the intrusion of the saline wedge into the Po branches and the coastal floods caused by the combination of the river supply, storms, and coastal storms.

Task 7.3 Replication Roadmap. The Task has the goal to summarize the activities performed in the different technical Tasks in order to point out the lessons learnt, the strengths and the bottlenecks during the main stages: design, implementation, operational phase. The findings are expected to streamline the transferability and upscaling of the Actions beyond the specific Case Study areas. Such processes are recognized supporting in the effective way the Priority 1 of the Sendai framework.

Among the four homogeneous areas identified in the Project, the activities are primarily focused on two macro areas: the coastal macro-area along the Upper Adriatic Sea and Metropolitan and diffuse urban centers hosting in the District a population of more than 10 million people. In this regard, it is pivotal to recall how the recently published Sixth Assessment Report on Adaptation of IPCC (2022) recognizes coastal areas and urban settlements as highly vulnerable to ongoing and future impacts of climate changes (also with different significance according to the considered area) [see Figure SPM.2]

Furthermore, the first two technical tasks (7.1 and 7.2) propose the development of predictive models to be implemented within Early Warning Systems. EWSs are fully consistent with the actions listed in National Adaptation Strategy; among the most relevant ones: enhancement of floods and low water river services (surveillance, monitoring, alert, structural and non-structural actions) by regional agencies for the protection of the environment, civil protection and territorial presidia; development and enhancement of decision support systems; enhancement of alert and monitoring systems; promote the adoption of scientific systems to support decisions; adapt the current alert, pre-alert and emergency management tools, prevent the increase of hydraulic and geomorphological risks, completing the legislative process initiated by DLGS 49/2010 for the implementation of the directive on the assessment and management of flood risks and carefully selecting the infrastructural defense works;

The strategies are brilliant examples of the triple Dividend of investing in resilience: “(1) Avoiding losses when disasters strike; (2) Stimulating economic activity thanks to reduced disaster risk; and (3) Development co-benefits, or uses, of a specific Disaster Risk Management investment” (www.odi.org/tripledividend)

The development of EWSs to cope with storms and coastal hazards represent innovative approaches, proposed by integrating (assimilating) the observations provided by cutting-edge monitoring tools (e.g. IoT devices) in expeditious but robust impact (physically based and/or data driven) models able to provide timely alerts. Such applications are expected to pave the way to the next generation of decision support tools (e.g. Digital Twin).

The activities developed within the three Tasks are strictly linked to those carried out within the other Work Packages: climate forcing and observations collected and processed in WP3 “Technical and Methodological approach” will support the climate resilient design of the systems (Task 7.1 and 7.2); at the same time, they result useful for testing and validation of predictive models developed. Stakeholder involvement needed for effective co-creation of adaptation solutions will require the collaboration with WP4 “Stakeholders Engagement and Capacity Building”. The lessons learnt from the different activities topic of Task 7.3 will be taken up in the Work Package 11 – “Sustainability, Replication and Exploitation” but they can be of interest also for the governance processes (WP2). The implementation of the Activities within the different Tasks will be monitored following the framework and KPI defined in WP9 “Monitoring and Evaluation of Project Impacts and Complementary Actions”. Finally, WP10 “Dissemination, Communication and Networking” will ensure a proper dissemination of the achieved results.

Description

Task 7.1 Risk planning and real-time management of critical events generated by storms (small basins in Emilia-Romagna; urban and peri-urban areas of the cities of Turin, Bologna and other cities in Emilia-Romagna and Lombardy) (M1-72) In Italy, the most significant expected impacts in the coming decades due to the climate changes will be the result of the rise in temperatures and the increase in the frequency of extreme weather events (including episodes of intense rainfall) as well as the reduction in average rainfall and river discharge flows. In particular, with reference to extreme precipitation phenomena, possible alterations of the hydrological regime are expected. The weather-related natural hazards and disasters (floods, debris flows, landslides, erosion, sinking) that have recently occurred in our country have brought to the attention of public opinion the issue of the impact of climate change on the frequency and intensity of extreme hydrological and geomorphological events. It is clear that the country's vulnerability, in the face of these profound changes, requires a reassessment, especially with regard to events that occur on reduced time scales. Also contributing to this is the urban expansion that has affected all of Italy significantly since the postwar period, the occupation of areas previously available for flooding volumes, and the gradual abandonment of the maintenance and protection function of the territories. The changes underway act starting from two essential elements of the climate: atmospheric temperatures and rainfall, the latter in a more diversified solution and with different incidence on different geographical areas. It should be emphasized that densely populated areas, e.g., large cities in Northern Italy, are particularly exposed and vulnerable to the adverse impacts of cloudbursts and extreme rainfall events. In these situations an adequate management of the drainage system is a key factor for both reducing the risks related to severe precipitations and limiting the environmental pollution due to waste water dispersion. The action therefore focuses on the safety of urban settlements, peri-urban areas in relation to intense and unpredictable storm events, with reduced intervention times in the main cities Piedmont, Lombardy and Emilia Romagna. In order to improve the climate resilience of urban and peri-urban areas relative to pluvial flooding, it is essential to improve rainfall monitoring capabilities, integrating all available information and measures such as rain gauges, radars and estimates obtained from the backhaul layer of the cellular communication network, and to use methodologies and warning tools in an integrated way extend as much as possible the risk perception ahead of time to reduce fatalities and flood losses. The short response times to this type of event also make it essential to improve forecasting techniques by extending observations with seamless forecasting and modelling systems. These must then be integrated with the appropriate hydrological / hydraulic modeling to allow effective risk assessment and management. The Action will concern two geographic scales:

- small basins in Emilia-Romagna;
- urban and peri-urban areas of the cities of Turin, Bologna and other cities in Emilia-Romagna and Lombardy (areas for which the pluviometric event determines hydraulic risks to the population or long-term polluting impacts).

Sub-Task 7.1.1 - Definition of forecasting methods and tools, verification of dataset availability (ARPAE, ADBPO, ARPAP, ARPALO POLITO, SMAT, UNIBO) (M1-M24) The task involves the selection of existing methodologies: observational, weather forecasting (nowcasting), and definition of the warning tools in small basins. The results of the action can be exported to other urban and peri-urban areas. The task involves carrying out the following activities:

A Analysis of existing methodologies and data available in the pilot areas:

preparatory phase to carry out the survey on the existing methodologies both at the river basin scale, for the purposes of water resources management, and at the urban scale, taking into consideration the needs of the stakeholders that can be used according to the criteria and purposes of the project, in particular end of managing the hydraulic risk. Verification of the availability of data from sources including rain gauges (PL) meteorological radar (WR) and data generated by telecommunication data transmission systems ("opportunistic" sensors such as CML) will also be carried out. The methodology is linked to that used in the RAINBO project which experimented in target areas of Emilia-Romagna with the use of CML sensors for estimating precipitation.

B Analysis of the availability of requirements for use in other areas:

the possibilities of exporting the methodologies used in the action will also be verified in other areas of the basin. Subsequently, the availability of data and datasets essential for the use of techniques and models in use in the identified areas will be verified.

Sub-Task 7.1.2 - Real-time monitoring, forecasting and management of critical events generated by storms (ARPAE, ADBPO, ARPAP, ARPALO, POLITO, SMAT, UNIBO) (M13-M60)

The task aims to optimize and systematize the resources defined in task 7.2.1 to support operational and real-time management as well as the effects of critical meteorological events. The task includes several activities:

A Monitoring of critical weather events:

the aim is to develop and make available a set of models, algorithms and procedures to measure the space-time field of precipitation on the ground. Classical sensors, PL, WR, and CML will be combined for the definition of products such as maps of presence and intensity of precipitation, identification of extreme events. The participation of ARPAE, ARPALO and ARPAP guarantees the availability of data from classical sensors. The merger of the individual estimates obtained will be one of the innovative elements of the project.

B Very short-term forecast of critical meteoric phenomena:

For a correct and effective management of the risk associated with intense convective precipitation, it is essential to combine the monitoring with forecasting techniques that allow the anticipation of warning messages. In the first hour extrapolative techniques while later the forecast will tend towards numerical modeling techniques (NWP). To achieve this result, seamless forecasting techniques will be used.

Sub-Task 7.1.3 - Development of methodologies for the detection of critical points (bottlenecks) in urban and peri-urban areas (ARPAE, ADBPO, ARPAP, POLITO, SMAT, UNIBO) (M13-M72). The task represents the heart of the action, both as regards the creation and drafting of content and possibly the design, implementation and testing (beta version) of a project platform. The task includes the following activities:

A Hydrological and hydraulic problems of pre-hilly urban areas:

Both Torino and Bologna will be a local area for the task. In Turin the following will be analysed: inadequacy of the drainage network related to urban flooding. Using scenario analysis, the conditions of intensity and spatial and temporal distribution of precipitation that can generate simultaneous hydraulic criticalities for the branches of stormwater management systems coming from the hilly canals and for the Turin main collector will be evaluated. The characteristics of the main hilly basins will be defined and the general assessment of the flows channelled connected to the main collector will be prepared. On the basis of the scenarios, preparation and intervention protocols will be prepared connected to the forecast of rain in real time and to the hydraulic monitoring of the collector in its upstream stretch.

In the local area of Emilia-Romagna where hydrological-hydraulic models will be tested for the simulation of the response of small basins during short and intense rainfall events. Based on the experience gained on the FEWS system (Flood Early Warning System), it will be evaluated to support a case study through activities that could include:

- i) hydrological-stochastic characterization of precipitation and flood events,
- ii) hydrological-hydraulic simulation, analysis and improvement of the modeling of small basins subject to storms, also in relation to climate and land use changes.
- iii) identification of the most suitable modelling solutions for the various planning, announcement and emergency management activities.

B Urban and periurban stormwater management domains and pluvial flood hazard and risk assessment:

The task will be carried out in the Turin area and the first belt with the aim of minimizing the overflows of combined sewer flow in water bodies. Nowcasting will be used in a drainage network management protocol related to urban areas. In conditions of an incipient storm, the system will be aimed at continuously managing both the incoming flows and the Turin collector network for the city. Nowcasting will be used for warnings on areas subject to urban storm flooding. The territory will be classified by critical intensity starting from historical rainfall events recorded by the drainage network manager. The historical approach will be integrated with information on the disposal of the collectors;

Concerning pluvial floods in urban and periurban areas, the task will develop and test innovative tools for high-resolution modelling of flood hazard and risk. In particular, the task will adopt the climate-service that was originally developed within the Climate-KIC Project "SAFERPLACES" (<https://saferplaces.co/>), further expanding its capabilities and application domain. The task will be developed using Safer_RAIN, which is a fast-processing Hierarchical Filling-&-Spilling Algorithm that enables mapping of pluvial flooding in large urban areas by accounting for rainfall input and infiltration processes through a pixel-based Green-Ampt model (see Samela et al., 2020, doi.org/10.3390/w12061514; Mediero et al. 2022, doi:10.1016/j.jhydrol.2022.127649 for details). The simplified model Safer_RAIN neglects the representation of the flooding dynamics and focuses on the representation of the hydrostatic and final inundation extent: the algorithm is based on water balance and drainage direction where topography dominates the water exchange. The task will focus on the cities of Bologna, as well as other Emilia-Romagna cities like Rimini and Ravenna, Milan and Turin and will use SAFERPLACES' module "Safer_RAIN" for producing high-resolution inundation scenarios using as input spatially distributed rainfall fields generated by combining together information collected at conventional (PL and WR)

and unconventional (CML) sensors, as mentioned above. Safer_RAIN inundation scenarios for the pilot cities will enable a quantitative assessment of the added value of combining conventional and opportunistic sensors in several operational domains, e.g. identification of pluvial flood hazard and risk hot-spots in urban and periurban areas, forecasting and nowcasting of urban inundations, identification of possible flood-risk mitigation strategies for climate-resilient urban planning, etc. Such scenarios will also become part of the platform content.

Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – (CMCC, ADBPO, ARPAE (+CNR-ISMAR), ANBI, UNIBO) (M1-48)

Climate change will alter the hydrological cycle, causing sea level rise and impacts on coastal areas.

The atmosphere and ocean warming triggers changes in major atmospheric systems and alters temporal and spatial precipitation and snow cover patterns, causing modulations in runoff, surface and groundwater storage, and river flow regimes (EEA, 2018 ; IPCC, 2014; Nicol and Kaur, 2009). According to the European Environment Agency (EEA), climate change increases the frequency and intensity of precipitation, which results in an increase in flood events. The municipalities and coastal areas of the Adriatic Sea are subject to coastal flooding phenomena caused by compound effect of severe extreme weather and sea conditions. Due to climate change and the expected sea level rise, the risk of coastal flooding in the region will increase over the next years. Local authorities and emergency services are not sufficiently prepared to react promptly to crisis situations due to a lack of innovative technologies and adequate equipment. Adaptation measures are needed to deal with extreme events in the coastal environment.

Changes in the hydrological cycle, sea level rise, floods, droughts, salt intrusion will affect the activities of coastal areas (e.g. tourism, agriculture, etc.) as well as services related to the marine ecosystem (coastal and marine protected areas, aquaculture). In particular the irrigated agriculture the production of hydroelectric energy and the use of water for cooling will be affected by altered coastal dynamic regimes, lack of water and salinisation of the same. In addition, sectors dependent on goods and services provided by wetlands and aquatic ecosystems will be endangered.

There are several ongoing initiatives relating to the monitoring and forecasting of extreme events in the Po River basin and in the coastal area around its mouth. The task will integrate observations and forecasting systems into the existing operational modeling chain available at Arpa, then will make the results available to the Civil Protection and the competent regional offices (for example, Soil Defense, AINB and ADBPO). The integrations of the existing forecasting systems with the new modelling implementations will improve the prediction of extreme events such as the intrusion of the salt wedge in the branches of the Po and coastal floods caused by the combination of river inputs and sea storms

The area of the Po delta is a system where the river interacts with the sea (coastal currents, the sea level, salinity, etc.) that causes salt intrusion and floods. These phenomena have been increasing in recent decades due to climate change. The most probable event of flood occurs due to the combination of abundant rains, that generate river flood, and strong storm surges. Coastal floods will affect increasingly large areas, putting the population at risk and causing high damage to houses, infrastructure, agriculture, aquaculture, tourism and local communities. Salt intrusion events already threaten coastal aquifers and river water quality causing severe damage to coastal agriculture, aquaculture and coastal and marine ecosystem services.

The analysis of the weather and sea conditions has shown that storm surges frequently occur in the northern Adriatic, especially in autumn and winter. Local authorities often declare a state of emergency due to floods and strong winds. There is therefore a need to improve the flood management and forecasting system on the Adriatic coast which can promptly alert the regional authorities. Moreover there is a great need to keep active, maintained and integrate the marine-coastal observation networks (wave buoys, tide gauges, coastal webcams, currentmeters, etc.), which allow knowledge of the territory and of the main sea dynamics as well as being fundamental for the validation of forecasting models and allowing a more precise identification of the alerting thresholds.

Local and regional communities are now pushed to be more active in adopting adaptation strategies and implementing effective warning systems in order to increase their resilience to salt intrusions and flood events.

A further problem tackled within this project is coastal inundation. Such threat is set to increase in magnitude and frequency in view of climate changes, as a consequence of Sea Level Rise (SLR), and of the intensification of extreme storms and precipitations. Here we'll develop a modelling system on a domain covering the whole Po delta, based on the circulation model Shyfer, on an unstructured mesh able to reach high resolution in proximity of the shores. The results will be used, together with other inputs, to force an inundation model able to simulate the coastal floodplain and to produce accurate inundation mappings. The modelling framework will be used to simulate past events and to characterize magnitude and frequency of extreme episodes at the Po delta, and to study present and future trends in coastal inundation. The results will be of foremost importance to provide a scientific basis to a strategy of adaptation to climate changes in the Po delta region.

There are several ongoing initiatives relating to the monitoring and forecasting of extreme events in the river and in the coastal area of the Po River basin. The action will integrate the components of the observation and forecasting systems into the existing operational modelling systems available and will therefore make available the results to the Civil Protection and the competent regional offices. The additions of the existing forecasting systems with the new model implementations will improve the prediction of extreme events such as the intrusion of the saline wedge into the Po branches and the coastal floods caused by the combination of the river supply, storms, and coastal storms.

CMCC, Arpae and UNIBO, with the support of CNR-ISMAR, will carry out a review and comparison of the existing observational and modeling systems with new simulations for the dynamics of the branches of the Po carried out using the Estuary Box Model (EBM developed by CMCC in collaboration with UNIBO) which simulates the dynamics of estuary relative to the volume flows from the open sea and from the Po to Pontelagoscuro, the salinity and temperature of both river and coastal waters. Furthermore in collaboration with CNR-ISMAR, unstructured grid hydrodynamic models will be implemented and used to solve coastal and river delta dynamics. Arpae will sign a cooperation agreement among public bodies with CNR-ISMAR (PG/2019/0179584) for the development of the activities.

Statistical studies will be carried out (i.e. for example for the computation of the combined episodes of sea storms and river floods) as well as analyses of the morphological evolution of the coast as a consequence of the climate change and the expected changes in the meteo-marine conditions (analysis carried out on a pilot area of the coast of the Po Delta which will make use of numerical finite element modeling support).

The results of the modeling activity will be used to improve the existing hydrological and marine-coastal operational systems available at Arpae, improving the sea level forecasting by combining the effects of both river and sea. CMCC and UNIBO will develop, with the support of the other partners, web-GIS tools to visualize potential flooded areas as a consequence of severe sea storms and/or river floods. These tools will be integrated in the operational chains and services at Arpae also for civil protection purposes.

Finally, the management and protection plans of coastal areas will be supported by providing information on the intrusion of the saline wedge and storm surges, also considering scenarios of climate change. ANBI and ADBPO will help to activate the "Contratto di Foce delta del Po" to improve the sustainability and resilience of coastal areas.

Task 7.3 Replication Roadmap (M16-60). The Task has the aim of facilitating the transferability and the scaling up of the proposed actions beyond the specific domains where they have been designed and implemented. Indeed, a large amount of knowledge about Disaster Risk Reduction remains fragmented and requires systematic and effective ways to be shared and tested more regularly elsewhere (Fakruddin, 2020 doi:10.2760/571085, JRC114026.). In this regard, we define transferability as techniques, knowledge or methods developed in one case study can be used in other places (Kelman et al., 2020; doi:10.1080/00167487.2012.12094332) while scaling up expanding” refers to the “physical spread of activities, structures or materials, as well as the spread of practices, behaviors or norms” (Morinière et al., 2018). In general terms, the two processes are not straight forward: innovations are rarely directly transferable and when transferred, they can fail in a new environment, or may be completely inappropriate. Under such constraints, they need to be adjusted and customized considering cultural, social, institutional and political differences between the cases but permitting, in some cases, to evolve into an improved version (Trucco, 2015; doi: 10.2495/DMAN150211). The Documents will sum up the lessons learnt from the different Tasks in terms of pros and cons, potential bottlenecks and the ways through which they have been addressed. In this regard, they will consider the main stages: design, implementation, operational phase. Two main target Users will be considered: decision makers and practitioners/territorial agencies. In the first case, the produced guidelines will be focused on administrative aspects: e.g. administrative aspects, how to improve the co-design processes. For the second ones, the implementation aspects will represent the key aspects: e.g. how to carry out a climate resilient design of the Actions, the requirements and features for the sensors to be adopted for the development of predictive models. Of course, the Report about the implementation/operational stages could provide specific, preliminary feedbacks about the choice performed during the design stages.

Task 7.3.1 Lessons learnt from the Design stages (CMCC, ARPAE) (M16-M36). The Task has the goal of reporting the main results in terms of winning experiences, bottlenecks following the Design stages of the actions carried out in the different Tasks.

Task 7.3.2 Lessons learnt from the Implementation stages (CMCC, ARPAE) (M36-M60). The Task has the goal of reporting the main results in terms of winning experiences, bottlenecks following the implementation phase and/or first operational stages of the actions carried out in the different Tasks.

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO/AIPO – NRRP – National Recovery and Resilience Plan - Renaturation of the Po River (178.500.000,00 € - Granted (Net. Decree 6 august 2021))
- RP - ERDF 2021-2027 - Policy Objective 2 Action II.2iv.5 - Interventions to increase the resilience of river territories to climate change (25.763.000,00 € - Not yet granted);
- RER - ERDF/ Regional Operational Programme 2021-2027 – Regional Operational – Programme/ European Regional Development Fund (PO-FESR) – (23.321.678,00 € - Not yet granted);
- ADBPO – National funds - 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts (6.300.655,00 € - Not yet granted);

- AIPO - LIFE19-ENV_IT_000071 - Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River (1.552.062,00 € - Granted on till 2025);
- ADBPO – National funds – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis (10.000.000,00 € - Not yet granted);
- RL - Regional Funds to implement flood directive measures - Flood risk mitigation and prevention (124.207.143,50 € - Granted (Reg. Law 9/2020 on economic))
- RL - National Funds – National agreement - National budget – flood risk mitigation and prevention (21.634.017,60 € - Granted)
- RER - Reforestation project “Mettiamo radici per il futuro” (3.250.000,00 € - Not yet granted)
- RER – ADRIACLIM – 1.474.995,00 € - Granted

Work package WP8 – Water and Land Management

| | | | |
|----------------------------|---------------------------|-------------------------|----------|
| Work Package Number | WP8 | Lead Beneficiary | 9. ERSAF |
| Work Package Name | Water and Land Management | | |
| Start Month | 1 | End Month | 72 |

Objectives

SO4. Improving water security and climate resilience.

Building up the resilience to climate change and variability and improving water security, by means of:

- promoting water saving and reuse, and conservative soil and farming management practices

SO1. Governance of climate adaptation at Po River District Basin level.

Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:

- reforms of water allocation, ecological flow, and reservoir management regimes and practices;

Expected results:

Refinement and demonstration of new smart techniques for the conservation and storage of water resources in times of high availability;

Modelling current and future climatic scenarios to support methodologies for the assessment of irrigation volumes at basin or field scale;

Platform for the exchange of knowledge activated in the frame of “Open Innovation” of the Lombardy Region. On the platform will be published at least 3 editorials per year, approx. 20 news and technical info per year, and will be created a community.

Preparation of the cognitive tool to support decisions for the analysis of the LDN at the hydrographic sub-basin scale

Documentation of 6-8 commercial "good examples" of conservative management of agricultural soils identified, collecting data on crop husbandry, energy consumption, and of the agronomic, productive and economic achievements.

Training courses, in number of 5 (one a year), for farmers, practitioners and technicians. Each course will last 5 days.

Two training sessions will be dedicated to theoretical aspects in the classroom and 3 to practical internships in the field.

Education activities, in number of 10 (two per year), with university students or upper secondary school pupils, preferably from agricultural courses, lasting 1 day each, to be carried out both in the classroom and in the field;

Organization and realization of 8 demonstration visits to commercial farms identified as "good examples" of application of conservation practices of land management and 4 visits to Italian and European "case studies" of particular interest, with the participation of groups of farmers, agricultural technicians and institutional representatives;

Implementation of LDN principles in government decisions and territorial management;

Valorisation and leverage of ongoing or recently concluded activities financed by RDP, European, National or Private funds (Leverage on complementary funds; Replication)

Update of the management plans of the river basin and address the Rural Development Plans CAP2021-2027 (start on 2023), to support the water balance at the district level and the dynamic management of the Ecological Flows;

Guidelines for the integration of the proposed adaptation actions within basin-scale, national and European policies.

Description

WP 8 aims integrating water governance and irrigation with soil management to enhance agroecosystems resilience and adaptive capabilities. The proposed tasks are effectively complementing activities carried out in the Po River basin, in Italy and in similar areas in EU, in the last decades. Achievements obtained by RDPs, EU, National and Private projects

can be magnified integrating the ClimaxPo results in the everyday governance and irrigation practices. All the action can be transferred over open canals networks and irrigation systems in Italy and in Europe. As a matter of fact, each of them is paradigmatic of a necessary step forward toward an adaptive and sustainable resource governance.

During phase 1 (M1 to M36) the activities will focus on i) identification and valorisation of ongoing or recently ended activities viable to be used as case studies; ii) bottom up, participative and proactive discussion involving the principal stakeholders about expected results, implementation barriers and further improvements (link with WP3 and WP4); set-up of case studies

By the end of phase 1 the WP will deliver n.1 Internal report on adaptation actions already undertaken and possible improvements; n.1 Interim report on capacity building activities carried out; n.1 Report on implementation of LDN methodology. The foreseen activity started, at least 2 meetings with relevant stakeholders will be organised; an applied smart governance dataset will be available; at least 2 demonstration visits have taken place.

The replication potential of these pilot actions in the river basin is huge: all the proposed novel solutions can be applied in large part of the Po River Basin agricultural land, crops and on a significant part the extensive canal network (of about 60000 km)

The relevance of these pilot actions for non-water related issues is mainly related to fertilisers and pesticides accumulation and circulation (soil contamination), and on agriculture and water governance decarbonisation through an optimised use of energy and soil carbon storage.

Task 8.1 - Sustainable and adaptive irrigation agriculture (ANBI, ANBI RP, ANBI RL, ANBI ER, ANBI RV, ADBPO, ARPAP, POLITO) (month 1-72)

A better governance of agricultural drainage/irrigation canals and of irrigated agriculture can contribute significantly to climate adaptation. Task 8.1 will foster climate adaptation acting on the demand side through an effective optimisation of some of the most critical resource utilisation phases, namely transport, field use, storage in soil and/or shallow water tables (up to -3 m depth).

The focus of the action is to direct as far as possible the integration of climate adaptation actions into the actions supported by RDPs of the new CAP that will start in 2023 and in the everyday practice of the Agricultural Water Board in charge of infrastructures and irrigation management in Italy and in Europe. The action comprises three main areas of activity focusing on:

- providing good practices and pilot cases for better management and governance of drainage / irrigation canal networks (Task 8.1.1)
- ICT tools for irrigation operating on a different scale and on the water balance of the agricultural sector from the field to the district of the river basin (Task 8.1.2);
- exploring the feasibility of new smart techniques for the conservation and storage of water resources in moments of high availability, with widespread buffering of floods (Task 8.1.3)

The action will also implement methodologies for the assessment of irrigation volumes, to be applied where this assessment is not implemented or affected by great uncertainty, with the dual objective of allowing the verification of the withdrawal and a better local water balance.

Task 8.1.1. Automatic or semi-automatic systems for controlling the hydraulic levels in the channels for the reduction of losses and for high efficiency governance (ANBI, ANBI RP, ANBI RL, ANBI ER, ANBI RV, ADBPO, ARPAP, POLITO) (month 1-48)

Starting from existing pilot experiences, the task aims to demonstrate the effectiveness of the automatic management of the gates on the channels in precisely regulating the water level inside them, increasing the flexibility in water use with rapid changes in levels, reducing the risk of floods in case of heavy rains. Thanks to the rapidity of intervention, the channels can be used more effectively also in terms of resource storage, when available in abundance. Ongoing or recently concluded experiences will be used for visits and discussions aimed at identifying the need for further refinements to be funded by RDP or other funding schemes available. Purpose of the task is:

- study the possibility of making water governance more effective by implementing an automatic or semi-automatic regulation of the level of the canals;
- apply artificial intelligence and new technologies already available to correctly evaluate water flows in canals to make risk assessment and related management possible;
- explore the use of information on canal flows, wet perimeter and leaks, to assess the contribution of agricultural canal networks to groundwater during early seasons;
- ensure the follow-up and dissemination of the positive results of the investments made in innovation, - WP2 and WP11
- launch a deep and structured capacity building action aimed at all interested parties with operational skills and management responsibilities, - WP4
- stimulate investments in infrastructure modernization. - WP2 and WP11

Task 8.1.2 Harmonization of the use of advanced and integrated IT tools for water balance at different application scales (POLITO, ADBPO, ARPAP,) (month 1-54)

This sub-task aims modernising and integrating agricultural water resources management tools, which can operate at

basin scale. The ICT tool will monitor crop water needs through remote sensing techniques, using images and metadata provided by the Copernicus platform. The tool will be able also to provide projections on the availability of resources, starting from budget estimates and meteorological medium-term forecasts. In the Po basin (e.g. Piedmont, Emilia Romagna, Lombardy) farmers and agricultural water boards currently make use of tools, in particular models or DSS, which combine soil-water balance, satellite observation, hydraulic models to assess the needs water of the irrigation district crops and estimate the existing gaps with the quantity distributed by the irrigation networks. The goal of the task is i) to study the possibility of making the tools already operating in the area interoperable; ii) to create a shared interpretation of the results of the tools to facilitate agreements on adaptation measures on a basin scale; iii) to explore the use of planning tools, eg. infrastructure modernization priorities and water reuse potential; iv) validate the methodology for assessing irrigation volumes at the pilot sites, with the aim of extending it on a large scale through remote sensing. The methodology will be applied to 1-3 pilot studies in the Piedmont region.

Task 8.1.3 Smart storage of water resources (ANBI, ADBPO, ARPAP, POLITO) (mesi 1-72)

The typical rotation of water demanding crops covers 3 years, the action aims to study the opportunity to introduce 2 years of winter cereals in the rotation, bringing it to 5 years. The cereals, selected among high-quality local cereals, will be irrigated "out of season" compared to the normal irrigation period, when the water flows abundantly over the ecological flows. Low energy methods will be applied, as surface irrigation or injection wells, aiming to recharge the shallow water table able to support capillary rise supplementing water to the crop. This task will i) identify the legal barriers for storing water in shallow water tables of agronomic interest; ii) propose policies and laws to facilitate the storage of soil water in context that don't fall under the aquifer recharge; I ii) study a viable crop rotation; iv) set up on a pilot test area to demonstrate the 5-year rotation (phase 3 ClimaXPo). The action will begin with an investigation of suitable areas taking into account the hydraulic, environmental and economic constraints. A feasibility study will be conducted, including the evaluation of ecosystem services and the analysis of the trade-off. The pilot can be included in the water table survey service of the Emilia Romagna Region, with constant benchmarking with similar soils

Task 8.2 - Conservation techniques for agricultural soils (ERSAF, ADBPO, CMCC) (month 13-72)

The action involves the development of specific capacity building through the identification of good examples and the implementation of training and / or updating courses (T8.2.1) in synergy with the general stakeholder's engagement and capacity building lead in WP4.

The action also focuses on the evaluation of the effect of conservative agriculture techniques in different climatic conditions through the support of crop modelling (T8.2.2)

Task 8.2.1 – Building capacity on conservation techniques for agricultural soils (ERSAF, ADBPO, CMCC) (month 13-72)

Case studies of particular importance will be investigated involving capacity building. Technical facilitators trained in WP4 will have a fundamental role in this regard, both as a support to the organization and operational management of activities, and in preparing, stimulating and aggregating the participation of target audience of training and demonstration activities. Facilitators will serve also as key operational elements developing networking activities involving stakeholders, and promoting mobilization of complementary funds. The activities will take place over the whole river basins during 5 years. The planned activities include i) activation and continuous updating of the existing knowledge; ii) "good examples" of application of conservation management methods of agricultural soils impacting on water resources and on erosion will be identified, described, analysed, evaluated; iii) a documentation (technical, visual, multimedia, ...) will be produced to support communication; iv) organization of field open days, with the participation of farmers, technicians and institutional stakeholders; v) training and technical updating aimed at farmers, technicians operating in technical consultancy for companies and educational institutions (universities, secondary schools), involving both theoretical (in the classroom) and practical activities (eg: demonstration visits, stages).

Task 8.2.2 Crop modelling of the impact of conservation agriculture techniques in different climatic conditions (ERSAF, CMCC) (month 37-72)

The task aims to evaluate the effect of conservation management techniques on the main cropping systems of the Po basin (e.g. wheat and corn, forage crops) and the storage of carbon in the soil compared to traditional management, with different climatic conditions (current and future). Conservation agriculture techniques will be compared with traditional management for crop productivity, soil carbon content and crop irrigation requirements according to diverse climate change scenarios and alternative crop management options (e.g. timing - duration, frequencies - and quantities of irrigation, processing, reduced tillage or non-tillage, rotations, etc.). The first step of the activity will consist of the collection of necessary datasets, which will be updated for the evaluation of impact (WP9). The evaluation will be carried out through the application of crop simulation models (e.g. ARMOSA model, EPIC model (Williams et al., 1989), e.g. the CSM-CERES Maize and CSM-CERES Wheat models implemented in the DSSAT (Decision Support System for Agrotechnology Transfer) software (Hoogenboom et al., 2015). The models will be calibrated/evaluated on available data generated by previous activities in experimental farms and/or pilot projects where different cultivation practices have been adopted and data on the impact of these practices on soils and crops have been collected. Best management practices will be drafted according to the different soil and climatic conditions, which will be collected in Guidelines for policy makers.

Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning (ERSAF, ADBPO) (month13-72)

The planned activities consist in the implementation of the principles and methodology of LDN to support the decision-making processes of management and governance of the territory. The objective is the achievement of conditions of non-increase in soil degradation in a context of need for adaptation to climate change. The final product will be an operational approach that can be replicated both throughout the project area and outside it. The Action will be conducted in the hydrographic sub-basin of the Oltrepò Pavese (Lombardia Region). Continuous interaction is envisaged with stakeholders and local public institutions (in synergy with WP4). The task involves i) the preparation of an easy-to-use web GIS tool to assess the effects of the interventions on the territory suggesting compensations and / or mitigations actions; ii) the realization of a continuous activity of technical support, information, involvement of local actors and awareness rising; iii) the preparation and presentation of periodic reports on the activities carried out and their progress. The web-GIS tool has the ambition to provide effective support for strategic and operational decision making on land use planning having potential impact on soil health. A specially appointed and trained facilitator (link with WP4) will work in the area, facilitating tool understanding and uptake by local stakeholders and decision makers. In this sense, the selection should give preference to a subject having experience and operating in the reference area, dedicated to agricultural support and land management.

Task 8.4 Planning guidelines and Policy recommendations (ERSAF, AdBPo, CMCC, ANBI) (mesi 37-72)

The pilot areas will be used to support analysis, modelling, risk orientation and new governance proposals to be implemented in new policies or to support existing ones. Targeted training activities, capacity building, stakeholder's engagement will be carried out during phase 1 and 2 and supported by production of Best Management Practices, tools, guidelines, newsletters, etc. This material will be utilised to leverage complementary funds aiming to further integrate ClimaxPo achievements offering a solution portfolio and forecast and operational tools to address planning and draft policy recommendations.

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO/AIPO – NRRP – National Recovery and Resilience Plan - Renaturation of the Po River – 178.500.000,00 € - Granted (Net. Decree 6 august 2021)
- REGIONE PIEMONTE - EAFRD 2014-2020 (2022) - Measures 4.4.1 (Elementi naturaliformi dell'agroecosistema) - 1.190.000,00 € - Granted (2022-2023);
- REGIONE PIEMONTE - ERDF 2021-2027 - Policy Objective 2 Action II.2iv.5 - Interventions to increase the resilience of river territories to climate change - 25.763.000,00 € - Not yet granted;
- RER - ERDF/ Regional Operational Programme 2021-2027 – Regional Operational Programme/ European Regional Development Fund (POR-FESR) - 23.321.678,00 € - Not yet granted ERDF Regional Operational Programme under approval and subsequently allocated in the CLIMAX PO project phase. The sum indicated will be made available during the project period;
- RER - EAFRD/ Rural Development Plan 2021-2022 – Rural Development Plan/ European Agricultural Fund for Rural Development (PSR- FEASR) - 20.515.880,00 € - Not yet granted. The Emilia- Romagna Region will allocate an economic sum (potential commitment of expenditure) on LIFE CLIMAX PO project measures. The sum indicated will be made available during the project period;
- RER - EAFRD/ Rural Development Plan 2023-2027 – Rural Development Plan/ European Agricultural Fund for Rural Development (PSR- FEASR) - To be confirmed - The RDPs in the new 2023-2027 programming period will take into account the CLIMAX PO project. Not yet granted;
- ADBPO - National Cohesion and Development Fund (FSC 2021-2025) - National Cohesion and Development Fund – L3 Acque sotterranee - 650.000,00 € - Granted on 2021 till 2025;
- ADBPO – National funds - 1 National budget - Verification of stability and resistance of the Po river embankments - 6.000.000,00 € - Not yet Granted;
- ADBPO - National funds - 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis - 10.000.000,00 € - Not yet Granted;
- ADBPO - National funds - 5 National budget - Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accounting - 2.000.000,00 € - Not yet Granted;
- ADBPO - National funds - 7 National budget - Research and improvement of the state of knowledge to reduce uncertainty. Reconstruction of the relationship between land use changes, environmental impacts and resilience of natural and anthropogenic systems to climate change - 750.000,00 € - Not yet Granted;

- ADBPO – National funds - 10 National budget - Research and improvement of the state of knowledge in order to reduce uncertainty - investigation of the effects of hydropeaking-thermopeaking phenomena - 75.000,00 € - Not yet Granted;

- ADBPO - National funds - 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts - 6.300.655,00 € - Not yet Granted;

- REGIONE LOMBARDIA - Regional Funds to implement flood directive measures - flood risk mitigation and prevention - 124.207.143,50 € - GRANTED (Reg. Law 9/2020 on economic);

- REGIONE LOMBARDIA - National Funds – National agreement - National budget – flood risk mitigation and prevention - 21.634.017,60 € - GRANTED;

- REGIONE LOMBARDIA - National Funds - National budget - flood risk mitigation and prevention - 6.050.000,00 € - NOT YET GRANTED;

- AIPo - CEF 2014-2020 transport Calls for proposals 2020 MAP - Action 2020-IT-TM-0034-S WIN-IT: Works for Implementing the Navigation in Northern Italy - 1.365.000,00 € - Granted on Dec 2021 till Dec 2024;

- RER – GECO2 – 438.720,00 € - Granted

Work package WP9 – Monitoring and Evaluation of Project Impacts and Complementary Actions

| | | | |
|----------------------------|--|-------------------------|----------|
| Work Package Number | WP9 | Lead Beneficiary | 5. UNIBO |
| Work Package Name | Monitoring and Evaluation of Project Impacts and Complementary Actions | | |
| Start Month | 1 | End Month | 108 |

Objectives

SO1. Governance of climate adaptation at Po River District Basin level. Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:

- monitoring, reporting and evaluation methods and practices for climate adaptation and coordination of funding

SO4. Improving water security and climate resilience.

Building up the resilience to climate change and variability and improving water security, by means of:

- demonstrating the performance of ecosystem-based approaches in comparison to conventional “grey” measures
- show-cases of replication and upscaling of climate-adaptation actions based on evidence-based solutions (e.g. nature-based solutions (NBS))

Expected results: Expected results of this WP relate to the actual evaluation of the results achieved by the entire project with a focus on the evaluation of the impacts of the implemented actions (see pag.3) by the Adaptation Observatory. Also, as an output of this WP we plan an estimation of the actual flow of resources of complementary funding and projects attracted in the area. Results are expected in the area of dissemination and exploitation by evaluating and synthesizing the single actions capacity building programme. The overarching monitoring closes up by verification of the level of uptake of the suggested measures in the legislation at regional and national scales. Since the verification goes beyond the simple control of a set-up, this WP will also produce a methodology for continuous dialogue with legislative bodies to facilitate the process of implementation of the developed adaptation measures.

Socio-economics monitoring activities will lead to the outcome and impacts evaluation on how the project contribute:

- to strengths multi-sector and multidisciplinary scientific and technical knowledge on climate change by creating a Multilevel Governance Deal (MGD) able to reorganize the climate adaptation governance (WP2 and WP3)
- to increase adaptation and awareness of the stakeholder and local communities on climate change issue regarding water resources through co-design and experimental activities (WP4).

Description

The focus of this WP is on the assessment of the impact of the project, during the project itself and after 3/5 years of the implementation.

During the first part of the project (M1 to M36) the activities will focus mainly on the assessment of KPI, revising the baseline and updating the KPI webtool. The WP will deliver and update (by the end of the project) KPI status on the webtool, a socio-economic report, a report on the NAS implementation in Italy and the catalytic /multiplier effect of the project on complementary investments.

The Monitoring, Reporting and Evaluation scheme adopted for this project will trace progress made, assess what has

been accomplished, and communicate the processes and outcomes of adaptation. The overarching goal, however, is to make possible 'new information and lessons learned to shape future decisions' (EEA, 2015) within an iterative adaptation policy cycle.

Coherence will be sought with the methodological approach proposed by the Covenant of Mayors for Climate and Energy initiative.

The consortium will monitor the impact of the LIFE-funded actions and the progress in the spending of complementary funding with its consequent impact on the implementation of the NAS.

Task 9.1 Monitoring of the results and impact of the project on climate objectives and compilation of KPIs [ADBPO, UNIBO, ERSAF, all partners.] (M1-108)

The project involves the implementation of environmental and climate monitoring actions, including the verification of (estimated and actually achieved) key performance indicators (KPIs) in the LIFE KPI web tool within the first 9 months from grant signature, at mid-term and at the end of the project

LIFE key performance indicators, outlined in section 2.1, will be specified and linked to the outcome indicators, addressing measurable and verifiable contributions to improved resilience to extreme climate related events (e.g. floods and droughts), reduced and more responsible water consumption, efficiency gains through climate risk-informed water and energy use and production, reduced economic and social impacts of climate change and tangible environmental improvements realised through the nature/ecosystem based adaptation techniques (e.g. ecosystem connectivity). The parameters needed to assess the influences on hydrological basins could differ from zone to zone and include rainfall, temperature, heat waves, periods of drought, wind and snow and will be made available as daily or seasonal data.

To obtain quantitative information and demonstrate the potential for replication, different sets of transversal indicators are identified. In particular, the indicators aim at verifying the performance enhancing due to the implementation of the activities in the different WP5-8 Tasks. This improvement is expected to promote the transferability of the best practices in other contexts (within and outside the Po River Basin). Given the significant variations among the activities, specific indicators will be agreed and suggested in the first months of the Project. Among the others, the following indicators have been identified:

- Hydro-climatological database of the Great Lakes built taking advantage of the highly-replicable ERA5 global database (WP5).
- Set up and feeding of a water discharge database (WP5)
- Set-up and feeding of an agricultural water uses database (WP5)
- Selection of an open-source hydrological model platform for the assessment of water availability in various scenarios (WP5)
- Selection of an open-source hydraulic model platform for the simulation of the real-time water storage (WP5)
- Morphological quality index (IQM) (WP6)
- Linear meters of restored shore (WP6)
- Area returned to the river corridor (WP6)
- Number of training events organized for technicians and practitioners within and outside the Pilot areas (WP7)
- Number of trained people during the events (WP7)
- Number of accesses to websites and platforms providing the results developed also thank to the Task activities (WP7)
- Number of accesses to the developed products by expert users for further post-processing (e.g., by API) (WP7)
- Number of national and international initiatives within which the activities carried out in WP5-8 will be capitalized, promoted and/or replicated (within and outside the Pilot areas)
- Number of forecast models (based on open-source codes) developed or exploited in the different Tasks, also through relocatable platforms for an easier and faster implementation (WP7).
- Extension of agricultural canal network (km) interested by at least one of the points (i to v), normalised upon the total network (kmMOD/kmTOT)
 - i. km of agricultural canal network involved in studies about the possibility of implementing an automatic or semi-automatic regulation of the level of the canals;
 - ii. km of agricultural canal network applying artificial intelligence and new technologies already available to correctly evaluate water flows in canals to make risk assessment and related management possible;
 - iii. km of agricultural canal network involved in testing the use of information on canal flows, wet perimeter and leaks, to assess the contribution of agricultural canal networks to groundwater during early seasons;
 - iv. km of agricultural canal network involved in testing WP2 and WP11 results;
 - v. km of agricultural canal network interested in modernisation investments in infrastructure as for WP2 and WP11
- Area suitable for the application of smart storage and extended rotation, expressed as potentially implementable area (PIA ha) (WP8)
- New governance proposals implemented in new policies or supporting existing ones (WP8)
- Leverage of complementary funds integrating CLIMAX PO solution (WP8)
- Rate of change of SOC within the pilot basin (WP8)
- Rate of change of the Variation degree of waterproofing / degradation of the territory (WP8)

- Number of municipal administrations involved in the process (WP8)
- Ratio between the number of involved municipalities that will update the plan contemplating the LDN and the number of involved municipalities that must update the plan (WP8)

During the project, the co-benefits related to activities evaluated with different KPIs will be identified and accurately described within the dedicated deliverable.

Subtask 9.1.1 Identification and implementation of monitoring boards

The subtask will be devoted to the identification of a board in charge of dissemination and communication activities as well as a board in charge of the exploitation of project results.

Task 9.2 Monitoring of the socio-economic impact of the project [ADBPO, CMBO, UNIBO, all partners] (M1-108)

Social Impact (UNIBO and CMBO)

The effectiveness of the project actions will be integrated with an assessment of the impact and creation of the socioeconomic value produced, using research and quantitative-qualitative analysis techniques as well as economic and social monitoring.

The monitoring and evaluation scheme adopted for this project will travel in parallel with scientific and technical measurements, assess the impact and value produced by the implementation of structural and technological project interventions, and communicate the results of adaptation actions with a strong focus on the positive externalities produced to reduce communities' vulnerability to climate change. Indeed, the broader and more ambitious goal is to make possible, accessible, and new information and lessons learned to shape future decisions could be implemented in an iterative cycle of adaptation policies.

The process of monitoring and evaluation will focus on the analysis of outputs (performance and effects) and benefits generated directly or indirectly from the activities carried out in the project. The articulated structure of the project - actions at district level (WP2-4), at focal point level (WP5-8) and transversal activities (WP 9-11)- ask for and integrated approach to monitoring. As the objectives of adaptation to climate change and the reduction of vulnerabilities related to high exposure to climate risk can be addressed not only with infrastructure interventions but also with initiatives and actions that increase awareness over the topic, produce active support and promotion of the climate issue to the public opinion (advocacy) and generate spaces of empowerment for stakeholders and communities in which the project is tested and implemented (task 4.2 and 4.3). Moreover, disseminate accurate scientific information to increase collective and integrated knowledge on environmental issues at local and institutional level (task 3.1 and 3.2) contribute to gain leverage on political and policy orientation in implementing a multilevel governance (MG) improving the quality of life of rural, urban and metropolitan areas (task 2.2, 2.3 and 2.4).

Economic Impact (CMBO)

The economic monitoring activities will be based on the following sub-tasks:

- an evaluation of the impacts of green infrastructures and environmental improvements on the territory, with the analysis of the positive effects produced on the basin areas and in the economic production of the reference territorial areas, including innovative ways of global service management and the impact linked to the transition from technological Smart cities to Smart Sustainable City ;
 - The definition of a set of economic indicators related to sustainable development goals;
 - The creation of business models for companies in the green economy sector with particular reference to the activities of nature based solution that is possible associate with green infrastructures and environmental improvements;
- The impact will include the study of the multiplier effect of the additional funds.

Task 9.3 Monitoring of the overall implementation of the NAS [ADBPO, ERSAF, all partner] (M1-108)

The action foresees two types of monitoring:

- the direct impacts of the project on the efficient and coordinated implementation of the strategy
- the direct and indirect impact of the project on the mobilization and coordination of complementary funds contributing to implementation of the NAS, including the after-LIFE period

The first level of monitoring allows to assess how the partnership is developing its capacity to implement the strategy through the project. The following capacity building indicators will be monitored in relation to the implementation of the NAS Strategy (non exhaustive list)

- No. of stable work connections between local institutions, the research community and non-governmental organizations for the strategy implementation
- No. of decision-making processes activated to implement the strategy
- No. of new departments / organizational units that have as their purpose the best implementation of the strategy
- No. of new information exchange mechanisms, for example platforms / websites
- No. of publications of international scientific or technical articles
- No. of active connections between institutions and the research community

- No. of participants and hours of training on NAS management
- No. of New services, improvements in the quality control of adaptation data
- No. of NAS action proposals implemented
- Complementary funding earmarked on NAS implementation

The second level of monitoring, on the other hand, aims at measuring the direct or indirect impact on the mobilization and coordination of the complementary funds used for the NAS implementation. The impact of the project as a catalyst and leverage effect for the mobilization of other funds will be monitored, also in the After LIFE period, by measuring:

- Value of the complementary funds foreseen by the project
- Value of the mobilization and / or coordination of other funds that have benefited from the participation of the beneficiaries in the ongoing decision-making processes relating to the allocation of regional, national and EU resources
- No. of public and private bodies involved
- No. of NAS action proposals NOT implemented

The task will be carried out throughout the duration of the project by ADBPO with contributions of ideas and proposals that will also be provided by the other project partners during the meetings of the boards and committees defined in WP1. These proposals will be presented by ADBPO and discussed within the boards and committees defined in WP1 in order to approve improvement proposals for the project to be applied in the execution of the next phase. For the last phase, these proposals will contribute to drafting the After LIFE Plan in order to guarantee their implementation even after the end of the project.

The implementation of the NAS especially related to the non-water will be monitored in this task, first by counting the number of replicated pilot actions and/or the participation of the project partners within the SEAPs produced in the basin area. For example, prevention and renaturalisation activities, flood risk activities and early warning systems for climate risk, etc. will be considered. In addition, the account will also be taken of all SNAC actions in the urban area, such as the management of the urban “heat island” effect, green and blue infrastructure, the use of rainwater, water retention and sustainable urban drainage, the degree of urbanization of the soil, areas, green roofs and walls, etc. The value of the overall mobilization of funds allocated to the production of SEAPs in the basin area and the value of the accumulates sums from the actions of the SEAPs, will be the measure of the overall effect of the task.

In addition to monitoring, the action will include the definition of corrective proposals for the project in the event that the monitoring reveals a delayed, partial or missed impact of CLIMAX PO on the implementation of the strategy. This will happen before the end of each phase of the project.

In the first phase, the action will start with the creation of the table of monitoring indicators and the exact definition of the sources to assess the indicators. An expected value at the end of the project will therefore be assigned to all indicators within the first 9 months. At each monitoring stage, a specific effectiveness index will be defined for each indicator as the ratio between the value reached and the expected value. The average of the value of the indexes will represent the measure of the capacity to implement the strategy through the project. Therefore:

- = 1 the project impact is equal to the expectations
- <1 the project impact is lower than expected
- > 1 the project impact is higher than expected

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- ADBPO – National funds – 7 National budget - Research and improvement of the state of knowledge to reduce uncertainty. Reconstruction of the relationship between land use changes, environmental impacts and resilience of natural and anthropogenic systems to climate change – 750.000,00 Not yet granted
- RLombardia – flood risk mitigation and prevention and Green infrastructure for water body (T6.3 “Lambro Selvaggio”) – 1.680.000,00 € - Granted

Work package WP10 – Communication, Dissemination and Networking

| | | | |
|----------------------------|---|-------------------------|-----------------|
| Work Package Number | WP10 | Lead Beneficiary | 10. LEGAMBIENTE |
| Work Package Name | Communication, Dissemination and Networking | | |
| Start Month | 1 | End Month | 108 |

| Objectives |
|---|
| <p>This WP foresees the implementation of a series of communication activities aimed at promoting the project and its results to a multitude of audiences, including the media and the public, and possibly engaging them in a two-way exchange. The WP also includes dissemination activities that foresee the public disclosure of the results by appropriate means including by scientific publications and or participation in seminars and conferences to favour the circulation of knowledge and results to the ones that can best make use of them. The implementation of this WP contributes to the achievement of the following specific objectives described in the section 1.2.</p> <p>SO1 - Governance of climate adaptation at Po River District Basin level SO3 - Building capacity and awareness SO4 - Improving water security and climate resilience</p> <p>Main Expected results:</p> <ul style="list-style-type: none"> • 100 public authorities engaged trough the awareness campaign for local administrations; • 600 officers of public authorities trained thanks to 32 seminars; • 600 people informed through the handbook of good practices; • 250 public authorithies adopt the CLIMATEPACT4PO • 10000 people raised awareness on climate change issues through 20 stages of the Carovana del Po; • 5000 citizens sign the Pledges4SRiver initiative; • 1000 people of local communities engaged through 24 Climate Cafè; • 4000 people of local communities engaged through 16 unconventional events; • 50 stakeholders involved in the creation of the EDUCLIMA network; • 1 LMS (Learning Management System); • 10.000 users of the platform; • 5000 people attend 3 edition of Po River Blue Fest; • 500 teachers trained through 20 courses; • 50 companies adopt the code of conduct; • 250 farmers trained thanks to 10 seminars; • 250 fishermen trained thanks to 10 seminars; • 125 farmers adopt a voluntary code of conduct; • 125 fishermen adopt a voluntary code of conduct; • 1000 professionals trained through 30 seminars; • 500 professionals adopt a voluntary code of conduct; • 50 companies sign the Climate Pact • 100 companies participate in the Climate Friendly award; • 5 millions people reached by media relations, social media, website and other communication activities; • dissemination of project results through networking activity with 20 different projects; • dissemination of project results through participation in 20 seminars and conferences; • 500 scientists reached by dissemination activities; • 20 articles published in scientific journals to disseminate project results. |
| Description |
| <p>T10.1 Communication plan and information materials (M1-M108) (LEGAMBIENTE, ADBPO, all partners)</p> <p>A Communication Plan will be designed and delivered within the first 4 months of the project. The plan will state how the most effective communication can be done and include a strategy, clear communication objectives, target groups, messages and means to communicate the purpose and results of the actions. The plan will follow the whole project cycle from the beginning until the end. Due to the long duration of the project, the plan will be reviewed and updated every 3 years. The Communication Plan will describe the communication strategy and tools and will define the project's brand/visual identity. This is necessary to make the project effective and immediately recognizable by the public. For this reason, a special project logo will be conceived in order to graphically represent the project's mission. The logo will be accompanied by a pay off, a short memorable and coherent text that will complete the visual identity of the project. The logo and the pay off will be part of the project's specific branding box that will also include: headed paper, business card, template for Powerpoint presentations, cover for publications and reports, etc. A specialized communication agency will be selected for the visual identity and the graphic design that will be adopted in all the communication materials.</p> <p>Information materials</p> <p>In line with the project visual identity, 25 notice boards will be produced and placed at the partners' headquarters. 25 roll-ups will also be produced to be used during the information and communication events organized by the project.</p> |

A leaflet describing the project's objectives and actions will be produced in Italian and in English. The leaflet will be distributed during the information and communication events organized during the project.

A brochure on climate change and adaptation measures will be produced in Italian and English. The brochure will describe the main effects of the climate change in the intervention area and will explain what kind of adaptation measures can be taken to cope with these effects.

To explain to the Kids the problem of climate change and the adaptation measures that can be taken, a comic will be made. The Layman's Report (will be an important communication tool for the After LIFE work. It will mainly be addressed to the general public as it will explain the project's main messages, activities and results in a clear way and understandable for the layman. The Layman's report will be written by a professional journalist and will be translated into Italian and English. Pictures, graphics, diagrams and tables will also help to communicate the issue in an understandable way. The report will be sent in digital format to all relevant organisations and stakeholders. A video version of the report will be realized too.

A four-month newsletter will also be published starting from the first year of the project. The newsletter will contain information on the project and will allow the consortium to stay in contact with the many stakeholders. a total of 27 numbers of the newsletter are foreseen, which will be sent to a mail list of recipients.

In order to promote the project, a total of 3000 ecogadgets will be produced. By way of example, they can be realized flags, T-shirts, reusable water bottles, beach towels, canvas bags, caps, brooches, pencils, etc..

10 Videoclips (60 seconds) will be created with the support of an external communication agency and will be disseminated mainly via the web and social media.

To ensure the visibility of funding all the communication materials will show the LIFE logo and the funding sentence "Co-funded by the European Union" to highlight the EU support.

To reduce the carbon footprint of the project all the information materials will be made exclusively in digital format. The materials can be downloaded through special QR codes that will also facilitate a more massive and widespread distribution than paper materials.

T10.2 Multi-target awareness campaign (LEGAMBIENTE, ADBPO Polito, UNIBO, CMBO) (M6-M108)

Through this task a rich program of activities will be aimed at informing, involving and mobilizing a series of stakeholders and in particular local administrations, citizens and local communities, companies, farmers. For each of these key stakeholders there is a set of activities described below.

The campaign will focus on the most important threats contributing to climate crisis in the intervention area. The task is necessary to sensitize some main targets on the need to adopt a local strategy for the adaptation to the climate changes strategy that can help to mitigate environmental, economic and social impacts. The action is also necessary to promote awareness of the project among the general public and increase social consensus of local communities towards policies and interventions for the protection of the environment.

a) Awareness campaign for public authorities (M6-M108)

To strengthen the resilience of our cities in the face of climate threats, there is a need to strengthen the commitment of local and regional authorities (regions, municipalities, protected areas, managing bodies of Natura 2000 sites and Mountain Communities

that are called upon to create initiatives that can promote both adaptation to climate change and mitigation of its effects. The campaign is aimed at both those who hold political roles (mayors and councillors), and those who hold technical roles within public administrations as general managers, administrators, officials and technicians. In this regard, starting from the sixth month of the project, a series of initiatives will be carried out. These include:

the implementation of a programme of 32 training seminars (an average of 10 for each region involved) to strengthen the capacity of local governments in the field of climate change. During these seminars the objectives and actions of the project will be presented and information will be provided drawing on existing resources, networks and platforms such as the Covenant of mayors for Climate and Energy, the European Green Capital, the Green Leaf Networks, the Green City Tool and the Green City Accord. It is estimated that a total of 600 people can participate in these seminars. The meetings will also be an opportunity to draw up a specific CLIMACTPACT4PO aimed to promote the undertaking of climate pledges by public authorities that will be adopted within the end of project by at least 250 public bodies. In particular, the purpose of the CLIMACTPACT4PO is to promote the taking charge of climate pledges by public authorities (regions, municipalities, protected areas, managing bodies of Natura 2000 sites and Mountain Communities) to strengthen the commitment of local and regional authorities that are called upon to create initiatives that can promote both adaptation to climate change and mitigation of its effects. The CLIMACTPACT4PO will be a sort of "Memorandum of Understanding" that will be adopted by 250 public authorities by the end of the project. We believe that this initiative, in addition, to making the project known, will make it possible to strengthen the involvement and commitment of these key stakeholders, guaranteeing the sustainability of these actions over time.

the preparation and dissemination of an handbook of good practices for adaptation to climate change. To reduce the carbon footprint the manual will be made only in digital format.

b) Awareness campaign for local communities and citizens (M6-M108)

To involve local communities, the following activities will be carried out:

Carovana del Po: it is an itinerant outreach campaign that will allow to highlight the importance and the environmental, economic and social value of the Po ecosystem made more fragile by climate change in addition to pollution and a sometimes unsustainable exploitation of its resources. the campaign will take place over a period of 3 years and will involve all the regions crossed by the Po river. There are a total of 20 stages during which a rich program of information events and cultural animation will be carried out. For each stage is foreseen the participation and involvement of the public and that by way of example can include excursions, educational workshops, flash mobs, talk shows with experts, initiatives to clean the banks, etc. organized by the local groups of Legambiente. Particular emphasis will be given to the events that will affect the 3 Unesco Mab Reserves involved in the project: Po Grande, Collina Po and Delta Po. The activities of the Caravan will be documented through videos and photos and can be followed through social media. During the campaign will be launched the PLEDGE4RIVER initiative aimed to promote the undertaking of commitments by individual citizens in favor of their river. These are even simple commitments that citizens can voluntarily undertake to contribute to the protection of the Po River. The initiative represents an informal way to support people in changing their behaviour and in strengthening the bond with their territory. Within the end of the project, 5000 citizens will sign the Pledges4SRiver initiative. We believe that this initiative, in addition, to making the project known, will make it possible to strengthen the involvement and commitment of these key stakeholders, guaranteeing the sustainability of these actions over time. It is estimated that at the end of the project at least 5000 people will join the initiative which will be promoted mainly through social media and the press (M37-M108)

River Café: to foster knowledge, integration and dialogue between local communities and partners, develop interest and a sense of belonging to the project, starting from the first year of the project, informal events called River Café will be organized at local level. A total of 24 events will be organized in the regions crossed by the Po river. The methodology of the Café allows the building of knowledge and familiarization within the local communities, strengthening the link with its own territory. It is estimated that a total of 1000 people will attend these events. (M6-M108)

Unconventional events: to raise public awareness of the importance and urgency to protect the Po River and his basin to counteract the effects of global warming, during the project will be organized 16 unconventional events that will involve local communities and citizens in different locations. In particular 12 events will be dedicated to the Big Jump, the European Rivers Network (ERN) campaign, to which Legambiente adheres. By way of example, unconventional events such as flashmobs, floor advertising to raise public opinion and opinion leaders on climate change; video mapping show on buildings, Kite Festival, balloon rallies and so on. It is estimated that a total of 4000 people will attend the events. (M6-M108)

Po River Blue Fest: the University of Bologna in cooperation with the Municipality of Bologna will develop 3 Editions of a special Festival dedicated to the adaptation of water resources to the climate crisis, which will be combined with the production of one or more site-specific performing and figurative art initiatives. Po River Blue Fest will create an unconventional space for sharing ideas and networking, making participants entertained, stimulated to create trusted relationships and encouraging further exploitation of the project results. The Festival format will be flexible and adaptable to different contexts in the different edition, able to meet sustainability (sustainable events protocol - waste, energy, resources) and accessibility requirements (design for all, LIS translations, accessibility to places, resources and cultural content). The organization of the specific editions will be anticipated by a co-design workshop with stakeholders, association, local activators and citizens to define the topics and the community expectation connected the territorial peculiarities. It is estimated that a total of 5000 people will attend these 3 events. (M6-M108)

EDUCLIMA: during the project an Educational District Network for Climate Adaptation will be created. The network will involve all the sectors connected to water use (e.g., agricultural, energetic, administrative, touristic, recreational, etc...) with a particular focus on urban and anthropized environment. The working tool for creating Adaptation Actions through Education will be the customized LMS (Learning Management System) platform EDUCLIMA. The LMS will represent a pole of attraction for professional operators and people involved in the management of the local territories (e.g., technical, and administrative staff, mayors, etc.), as well as a ground for discussion for several training agencies (schools at all educational stages, universities, associations, and agencies involved in the creation of contents related to climate change). The platform will also act for the dissemination towards the 'general public'. The main features of the platform will be: content relevance and usefulness, simplicity, repetition, bite-sized, with a particular emphasis on gamification. Different formats will be provided (e-learning lessons, animations, simulations, virtual tutors, video sliding doors, webinars, motion graphics, interactive multimedia screens, interactive multimedia hypertexts). based on the different targets and the contents availability. For the success of the task, it is of seminal importance the staff recruitment for network animation and EDUCLIMA contents creation. The task will take place over a period of 9 years and will involve all the people in the Po River basin. It is expected that at the end of the project at least 50 stakeholders will be involved in the network creation, as well as 10.000 people will use the platform EDUCLIMA. (M1-M108)

c) Awareness campaign for schools (M37-M72)

In the regions interested by the project, a special programme of training initiatives has been designed for teachers. The activities, that will be implemented from 4th to 6th years of the project, are described below:

SOS PO: This initiative carried out by Legambiente aims to train teachers working on the topics of climate change and

river ecosystem, highlighting its importance and the threats to which it is subjected due to climate crisis. The idea is to support teachers working in the territories of the Po Basin with the knowledge and tools to start educational programs in the classroom that can interest and involve students. In this regard, it is planned that 20 distance learning courses will be carried out. An average of 25 teachers are expected to participate in each course. This activity also aims to ensure the long-term sustainability of educational interventions centered on the river environment, allowing teachers to carry out this type of educational programs over the years.

d) Awareness campaign for farmers and fishermen (M37-72)

The project provides a set of information and awareness activities dedicated to these categories since they are end-users of the river habitats. Through the communication and awareness initiatives that will see them as protagonists, these stakeholders, will therefore be able to develop a new sensitivity during the project and in the years to come. It is estimated that 500 representatives of these categories will be engaged through 20 meetings (10 for each category). It is estimated that a total of 500 people will attend these events. The meetings will also be an opportunity to draw up a specific code of conduct that will be adopted by at least 250 participants in this activity.

e) Awareness campaign for professionals and groups of experts (M73-M108)

The project will allow to engage also professional orders (Agronomists, Agrotechnicians, Lawyers, Biologists, Chemists, Geologists - Geomorphologists and Engineers) and groups of experts such as GRAL Alluvioni Group, CISBA - Italian Center for Biological Studies and CIRF - Italian Center for River Restoration. For these categories a set of training seminars focused on water management, land management and biodiversity management has been planned. A total of 30 webinar are planned (10 for each aforementioned topic). It is estimated that a total of 1000 people will attend these events. The webinars will also be an opportunity to draw up a specific code of conduct that will be adopted by at least 500 participants in the training activities.

f) Awareness campaign for companies (M73-M108)

During the last 3 years of the project, an information and awareness-raising campaign will be launched for the business world. The following activities will be implemented:

Climate Pact: Through a participatory path, which will be launched in each of the regions involved and which includes 4 meetings each, the representatives of companies will elaborate a voluntary code of conduct that each company will be invited to adopt by the end of the project. The code of conduct is aimed at strengthening the contribution of companies to the resolution of the climate emergency and at the same time improving the environmental sustainability of the production sector while avoiding or at least limiting the negative impacts caused. The code of conduct, will be adopted by the end of the project by at least 50 companies.

Climate-Friendly Award: to encourage companies operating within the Po basin to take on ever greater commitments to combat the climate emergency, the Climate-Friendly Companies Award will be launched. It is an annual award, provided for companies operating in various production and financial services sectors, intended for all those product, process, service, technological, managerial and social innovations, which demonstrate to contribute to significant reductions in environmental impacts, to considerable strengthening of resilience to the effects of climate change and which are notable for their originality, replicability and development potential.

T10.3 Media relations, social media, website and other communication activities (M1-M108) (LEGAMBIENTE, all partners)

Media relations (M1-M108)

In order to make the contents, objectives, results and impact of the project known to the general public, a strong media relations activity will be carried out during the whole duration of the project. For this purpose, it will be implemented:

- starting press event for the presentation of the project within the sixth month of the project;
- periodic sending of press releases; 50 press releases are expected to be drafted and distributed by the end of the project, 500 press articles and 30 TV and radio services are expected to be published on the project;
- production and distribution of press kit for printing on pendrive (100 copies), containing the presentation of the project and partners, video and photographic material in digital format, logos of the project and partners and infographics. LIFE and EU data, data and information on project and partnership;
- realization of 3 educational tours for journalists (M30, M60, M90). It is estimated that a total of 30 journalists will attend these events.
- signing of 2 media partnership agreements with newspapers, magazines, radio, TV, portals, etc.;
- preparation of a periodic press review with articles, news, radio and TV sections dedicated to the project.

Social media (M1-M108)

Particular attention will be paid to communicating the project and its results through social media. Within 6 months from the start of the project, an information and promotion activity will be launched through social media. In this regard, social profiles will be activated on Facebook, Twitter, Instagram to make known the contents of the project, explain the

various initiatives planned and promote knowledge of issues related to climate change, adaptation and the river habitats. Some contents regarding the project will also be promoted through advertising activities in order to strengthen the impact on social media,

Website (M1-M108)

Within the first 3 months of the project a website will be created that will have a double function: on the one hand it will describe the objectives, actions and progress of the project allowing users to read up on the different activities; on the other hand, it will constitute a knowledge hub on climate change, allowing effective literacy work to be carried out on these issues, helping to counter denial and disinformation.

Other communication activities (M37-M108)

To further strengthen communication activities, the following initiatives will also be carried out starting from the fourth year of the project:

Advertising activity

Digital Out of Home (DOOH) campaign using highly visible giant screens located in the heart of large cities falling within the project area.

Podcast

These are original audio content that include different episodes in which different topics will be dealt with from time to time. The episodes will be made available through distribution platforms such as iTunes and Spotify.

It is estimated that 5 million people will be reached during the project through media relations, social media, web and the other aforementioned communication activities.

T10.4 Dissemination activities (M13-M108) (ADBPO, all partners)

Dissemination activities aiming at maximising the impact of project results and deliverables in the public domain (scientific community, policy makers, environmental organizations, stakeholders identified in T1.3) will be performed. Within the second year of the project (M16) a dissemination plan will be developed: it will contain a set of and of measures planned for the dissemination of project results. The plan will foresee:

Participation in seminar and conferences

During the project rollout, project partners will attend national, european and international seminars, conferences and other events focused on the topics of climate change, protection of river ecosystems. The aim is sharing with public institutions, scientific community, environmental NGOs, knowledge and experience on these topics and promoting the project results among the wider set of potential stakeholders. In the last few years many conferences have been organized on these topics but we still do not know in advance which one the project partnership will attend. We can certainly include some the following events:

Final conference

During the last 3 months of the project, a final conference of international level will be organized in Parma to present the results achieved, good practices and lessons learnt. The conference, which will be attended by representatives of relevant European institutions (e.g. European Commission, European Environmental Agency, etc.) and stakeholders (e.g. European Environmental Bureau), national bodies including e.i. the Italian Ministry of Ecological Transition, Italian Ministry of Agriculture, ISPRA, Environmental Regional Agencies ARPA/APPA, Basin Authorities, management bodies of protected areas and Natura 2000 sites, environmental associations, etc. At least 100 people are expected to attend the Final Conference.

Networking

Networking with other LIFE and non LIFE projects will be essential for the dissemination activities. Emphasis will be given to working groups, networks and projects currently being implemented or already completed also in order to analyze the solutions applied and the results achieved in other geographical areas or countries. In order to promote the dissemination of results, the exchange of experiences, information, applied methodologies and best practices, the networking activity will be carried out with projects dealing with the climate change adaptation, water management, protection of the river habitats.

Networking will be organized during the project as follows:

- 1) from month 7 to 12. identification of at least 30 concluded or ongoing projects dealing global change and river habitats (including the ones listed above);
- 2) from month 12 to 16. selection of 20 projects, based on the affinity of the topics covered and the proposed methodologies;
- 3) from month 21 to 24. preliminary e-mail contacts with the project's contact points to verify their interest in collaborating. At least 5 projects willing to cooperate;
- 4) from month 25 of 36: participation in at least 2 international events organized by the selected projects;
- 5) from month 37 to 108. participation of the project staff to a "study visit" in order to consolidate the collaboration. At least 3 study visit.

Scientific publications (ADBPO, UNIBO, POLITO, all interested partners)
The public disclosure of the project results will include scientific publications. It is estimated that during the project at least 20 articles illustrating the results of the project will be published in Indexed scientific journals.

Links between the Complementary Actions and funds

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at the District level, so there are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term.

Given that some of the complementary funds are not yet guaranteed, it has identified the links between the action plans and the actions planned by complementary funds:

- RER – Reforestation project “Mettiamo radici per il future” – 3.250.000,00 € - Not yet granted
- ADBPO – National Funds - 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts – 6.300.655,00 € - Not yet granted
- RER – ADRIACLIM – 1.474.995,00 € - Granted

Work package WP11 – Sustainability, Replication and Exploitation

| Work Package Number | WP11 | Lead Beneficiary | 1. ADBPO |
|---------------------|--|------------------|----------|
| Work Package Name | Sustainability, Replication and Exploitation | | |
| Start Month | 1 | End Month | 108 |

Objectives

SO5. Institutionalisation of climate adaptation at Po River Basin District level. Making climate adaptation a permanent part of the River Basin District governance, by means of:

- a consolidated and permanent multi-level governance structure with dedicated, thematic task forces
- a consolidated and permanent system of Stakeholder Boards and capacity building
- dedicated technical tools (ie. the adaptation observatory and the adaptation platform)
- cross-sectoral working groups mainstreaming climate adaptation in different sectors and highlighting dedicated funding streams
- technical guidelines and policy recommendations to mainstream climate adaptation in the revision and update of plans, strategies and policies
- participation in National and International working groups
- exchanging visits and good and bad practices with other National and International River Basin District Authorities

Expected results:

1 Sustainability and Exploitation plan with guidelines to generate exploitable and sustainable results

Integration of the ordinary planning and management duties of ADBPO, AIPO and of the regional institutions within the Po River basin

Contributions to the update of the Po River Basin Management Plan and other plans

Contributions to the update of the National Adaptation Strategy (NAS) and National Adaptation Plan (NAP)

Exploitation and transfer of project generated good practices within the District

1 Replication plan with guidelines to generate replicable results and lead peer-to-peer exchange and replication activities

3 Peer-to-peer exchange visits (1 per phase) and activities with at least 1 Italian river basin district

3 Peer-to-peer exchange visits (1 per phase) and activities with at least 2 European river basin districts

Participation in national and EU thematic working groups and conference to support replication

Description

The focus of this WP is to consolidate the work done on adaptation, identify and exploit the main results and achievements and embed them in the ordinary planning and management duties of the institutions and organisations that contribute to the governance of the Po River Basin District.

Besides exploitation and sustainability, this WP focuses on replication and upscaling of project results at regional, district, national and EU level.

During phase 1 (M1 to M36) the activities will focus mainly on creating the basis and guidelines for sustainability and

exploitation of future activities and results (MGD structure and task forces, Stakeholders Boards, Adaptation observatory, Adaptation Platform, financing streams earmarked for adaptation, etc.) and at the same time the consortium will start engaging other river basin district authorities at national and EU level and organise exchanges of visits and knowledge. By the end of phase 1 the WP will deliver a sustainability plan with guidelines and initial exchanges with other river basin district authorities.

Task 11.1 Sustainability and Exploitation planning (ADBPO, all partners)

Since the beginning of the project the consortium will develop a sustainability and exploitation plan that will be updated throughout the project implementation with the aim to identify the main achievements to exploit and common guidelines to do so.

This task will be interconnected with most of the activities implemented in the previous work packages.

The focus of the sustainability and exploitation effort will be on supporting all project activities in generating exploitable and sustainable results.

In particular:

1. Consolidating the structure and work of the Multi-level Governance Deal (WP2) and its dedicated task forces
2. Making the Adaptation Observatory (WP2) and the Adaptation Platform (WP3) permanent
3. Consolidating the Stakeholder Boards and the training and capacity building schemes (WP4)
4. Making funding streams earmarked for adaptation permanent at District level (WP2)
5. Facilitating the uptake of technical and methodological guidelines produced by the pilot actions (WP5-6-7-8)
6. Facilitating the uptake of policy recommendations and guidelines into the revision and update of plans, strategies and policies
7. Ensuring that the staff recruited/trained during the project will continue to work on the implementation of the NAS at District level (WP2-3-4-5-6-7-8-9-10)

Points 1 to 4 will be the result of a constant cooperation between this task and the tasks dedicated to producing the specific achievements.

On the other hand, points 5 and 6 will have a dedicated tasks in this WP.

All partners will contribute to the plan according to their needs and opportunities.

For point 7 risk is that the staff (WP2 – WP10) recruited/trained during the project does not continue to work on the implementation of the NAS, the mitigation measures proposed are that the partners will be encouraged to recruit new staff on a long term basis and to create positions for trained staff that are specifically dedicated to adaptation planning, funding and management and to the long-term implementation of the NAS.

Task 11.2 Update of the Po River Basin Management Plan and other plans (ADBPO, AIPO, RLombardia, RPiemonte, RER, with contributions from technical partners) (M25-108)

Technical and methodological guidelines produced in WP5-6-7-8 along with all horizontal activities and policy recommendations in WP2-3-4 and the monitoring action in WP9 will generate inputs to ADBPO and the dedicated task forces of the Multilevel Governance Deal and will feed into the ongoing 6-year planning cycle of the Po River Basin Management Plan lead by ADBPO with significant stakeholder engagement.

The present planning cycle is expected to end in 2027, therefore the project will influence directly at least 2 planning cycles (2021-27 and 2028-34).

In the same way, ADBPO and its relevant stakeholders will benefit from the project results and will use them to embed climate adaptation in all other relevant plans, such as the Flood Risk Management Plan.

This task will integrate the ordinary planning and management duties of ADBPO, AIPO and of the regional institutions within the Po river basin.

Task 11.3 Update of the National Adaptation Strategy (NAS) and National Adaptation Plan (NAP) (ADBPO, SOGESCA, UNIBO, POLITO, with contributions from technical partners) (M25-108)

ADBPO, with the support of the Steering Committee and of the MGD task forces, is in constant contact with the Ministry for Ecologic Transition, in charge of the NAS and NAP (not yet approved) and providing input and contributions to national strategies and plans with effects on the District is part of its ordinary planning and management activities.

Using the technical and methodological guidelines produced in WP5-6-7-8, the policy recommendations from WP2 and all the data coming from WP3 and WP9, the consortium lead by ADBPO with the support of CMCC and the other technical partners will provide contributions for the monitoring and possible updates of the NAS and, eventually, of the NAP.

Task 11.4 Exploitation of project results at Po River Basin District Level (ADBPO, CMBO, all partners) (M37-108)

WP5-6-7-8 will generate technical and methodological guidelines and policy recommendations that will allow the MGD dedicated task forces and the whole consortium to promote a set of newly generated good practices with tested results and good potential for exploitation within the District.

MGD will use the Stakeholder Boards at Regional and District level to promote a bottom-up implementation and collection of expressions of interest from relevant institutions and stakeholders, while a top-down exploitation will be executed in task 11.2 with the update of strategies, plans and policies.

This task will be reinforced by dissemination actions in WP10.

Task 11.5 Replication planning (ADBPO, all partners)

Since the beginning of the project the consortium will develop a replication plan that will be updated throughout the project implementation with the aim to identify the main achievements to replicate at National and Eu level, with common guidelines to do so.

This task will be interconnected with most of the activities implemented in the previous work packages.

The focus of the replication effort will be on supporting all project activities in generating replicable results, creating the basis for potential exchange and transfer to other Italian and International river basin authorities and stakeholders.

In particular:

1. A consolidated governance structure tested via the Multi-level Governance Deal (WP2) and its dedicated task forces
2. An operative Adaptation Observatory (WP2) and Adaptation Platform (WP3) permanent
3. The added value of working with Stakeholder Boards and shared training and capacity building schemes (WP4)
4. Embedding funding streams earmarked for adaptation in ordinary planning and management duties at District level (WP2)

5. Sharing the technical and methodological guidelines produced by the pilot actions (WP5-6-7-8)

6. Sharing policy recommendations and guidelines into the revision and update of plans, strategies and policies

Replication activities will be based on a peer-to-peer approach facilitating the exchange of knowledge and experiences in both directions. Therefore, the consortium will contribute to the sharing of good practices in adaptation and water management, while receiving useful contributions for the project and suggestions.

Replication activities should fine interaction with task 1.8 External Advisory Board, as part of the invited members with be representatives of other Italian and European river basin authorities.

All partners will contribute to the plan according to their needs and opportunities.

Task 11.6 Peer-to-peer Replication and Exchange with other National and European River Basin Districts (ADBPO, all partners) (M1-108)

The focus of the action is to multiply the effects of the project, through the transfer and replication of good practices and effective methodologies developed and used by the consortium.

This replication action is lead in a proactive way and, in doing so, it also aims at collecting inputs, suggestions and good practices from potential beneficiaries of replication activities. Therefore, it is both a replication as well as a peer-to-peer exchange process.

The Report on peer-to-peer, replication and exchange activities (D11.6) should include at least the following results:

- Exchange visits with at least 1 Italian and 2 EU river basin authorities
- Participation in National and EU dedicated working groups
- Sharing of the sectorial KPIs for the evaluation of impacts on the implementation of the NAS at river basin level
- Sharing of the MGD and stakeholders engagement approach and capacity building programme (with a focus on water and adaptation in Metropolitan and Diffuse Urban Centres)
- Sharing of guidelines and policy recommendations resulting from pilot actions in WP5-6-7-8
- Collection of info on complementary funding triggered in peer river basins in Italy and the EU (ie. through ERDF) following peer-to-peer activities

Task 11.6.1 Analysis of National and European river basin districts (ADBPO) (M1-12)

To make cooperation and exchange more fruitful and effective, an initial analysis of National and European river basin districts will be lead by ADBPO in order to identify at least 3 river basins in Italy and at least 5 river basins in Europe that have similar problems and needs (at this stage, letters of support have been collected from 2 Portugues and 1 Hungarian River Basin Managing Authorities). The shortlisted river basin authorities will be contacted in order to arrange an exchange of visits, knowledge and strategies.

Task 11.6.2 National Replication and Exchange Actions (ADBPO, all partners) (M13-108)

At least 1 Italian River basin will be selected from the shortlisted ones.

At this stage the idea is to exchange initial contents and knowledge via web and then organise an exchange of visits.

ADBPO will organise a visit to the selected Italian River Basin which will then be invited to visit the Po River Basin.

We expect to organise 3 peer-to-peer exchange visits, 1 per project phase in order to be able to receive inputs and comments at each stage of the process and, at the same time, be able to provide contents and results coming from the different moments of implementation of CLIMAX PO.

Replication potential will be integrated by the participation of ADBPO in National thematic working groups and conferences, such as the Coordination Working Group of all the permanent District Observatories on water use which include most of the Italian river basin districts.

Task 11.6.3 EU Replication and Exchange Actions (ADBPO, all partners) (M13-108)

At least 2 European River basins will be selected from the shortlisted ones.

At this stage the idea is to exchange initial contents and knowledge via web and then organise an exchange of visits.

ADBPO will organise a visit to the selected European River Basins which will then be invited to visit the Po River Basin.

We expect to organise 3 peer-to-peer exchange visits with each river basin authority, 1 per project phase in order to be able to receive inputs and comments at each stage of the process and, at the same time, be able to provide contents and results coming from the different moments of implementation of CLIMAX PO.

Replication potential will be integrated by the participation of ADBPO in European thematic working groups and conferences.

STAFF EFFORT

| Staff effort per participant | | | | | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------------------|
| <i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i> | | | | | | | | | | | |
| Participant | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | WP7 | WP8 | WP9 | WP10 | Total Person-Months |
| 1 - ADBPO | 46.30 | 36.40 | 20.50 | 25.50 | 52.70 | 20.90 | 16.40 | 19.10 | 22.70 | 15.90 | 299.10 |
| 2 - AIPo | 5.10 | 8.20 | | 5.00 | 13.60 | 26.40 | 1.80 | | | 7.30 | 72.40 |
| 3 - ARPAE | 5.10 | 12.30 | 33.20 | 1.80 | 1.80 | | 54.10 | | | 1.80 | 114.60 |
| 4 - ARPAP | 5.10 | 10.00 | 29.50 | 0.90 | 41.40 | | 50.00 | 12.70 | | 7.10 | 158.20 |
| 5 - UNIBO | 4.70 | 3.60 | | 14.50 | | 8.00 | 104.50 | 8.00 | 109.10 | 27.30 | 285.60 |
| 6 - ANBI | 4.70 | 5.90 | 0.90 | 3.60 | | 0.50 | | 3.60 | | 5.00 | 29.20 |
| 7 - CMCC | 1.10 | 9.60 | 35.10 | 7.70 | 21.50 | 12.30 | 65.00 | 7.70 | | 13.60 | 173.60 |
| 8 - CMBO | 4.70 | 15.50 | | 40.50 | | | 6.80 | | 18.20 | 22.70 | 118.40 |
| 9 - ERSAF | 1.00 | 2.00 | | 9.00 | | 33.00 | | 60.00 | 18.00 | 1.80 | 126.80 |
| 10 - LEGAMBIENTE | 9.60 | 11.40 | | 25.50 | | | | | 4.00 | 108.00 | 167.10 |
| 10.1 - Legamb Lomb | 1.20 | 1.80 | | 8.20 | | | | | | 36.40 | 47.60 |
| 10.2 - Legamb Veneto | 1.20 | 1.80 | | 8.20 | | | | | | 36.40 | 47.60 |
| 10.3 - LEGAMB PVDA | 1.20 | 1.80 | | 8.20 | | | | | | 36.40 | 47.60 |
| 10.4 - LEGAMB ER | 1.20 | 1.80 | | 8.20 | | | | | | 36.40 | 47.60 |
| 11 - POLITO | 4.70 | 2.70 | | 14.50 | 89.10 | 75.00 | 45.50 | 25.00 | | 27.30 | 289.70 |
| 12 - SMAT | 4.70 | 13.60 | | 9.10 | | | 25.00 | | 2.70 | 1.80 | 57.80 |
| 13 - RER | 4.70 | 15.90 | | 8.20 | | | | | | 1.80 | 35.10 |
| 14 - RPiemonte | 4.70 | 15.90 | | 8.20 | 10.00 | | | | | 1.80 | 45.10 |
| 15 - RLombardia | 4.70 | 13.20 | | 9.10 | 10.00 | 4.50 | | | | 1.80 | 47.80 |

| Staff effort per participant | | | | | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------------------|
| <i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i> | | | | | | | | | | | |
| Participant | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | WP7 | WP8 | WP9 | WP10 | Total Person-Months |
| 16 - SOGESCA | 9.20 | 2.70 | | 32.30 | | | | | 4.50 | 4.70 | 54.30 |
| 17 - ARPA Lombardia | 3.60 | 5.70 | 6.00 | 1.20 | 6.00 | | | | | 1.00 | 24.70 |
| 18 - ANBI-ER | 2.00 | 1.80 | | 2.50 | | | | 4.50 | | 8.20 | 24.50 |
| 19 - ANBI Lombardia | 2.00 | 1.80 | 5.50 | 3.00 | | | | 3.60 | | 3.60 | 23.60 |
| 20 - ANBI PIEMONTE | 2.00 | 1.80 | 1.40 | 2.50 | | | | 4.50 | | 3.60 | 18.80 |
| 21 - ANBIVENETO | 2.00 | 1.80 | 1.40 | 2.50 | | 1.80 | | 4.50 | | 5.50 | 24.00 |
| Total Person-Months | 136.50 | 199.00 | 133.50 | 259.90 | 246.10 | 182.40 | 369.10 | 153.20 | 179.20 | 417.20 | 2380.80 |

| Staff effort per participant | | |
|--|-------------|----------------------------|
| <i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i> | | |
| Participant | WP11 | Total Person-Months |
| 1 - ADBPO | 22.70 | 299.10 |
| 2 - AIPo | 5.00 | 72.40 |
| 3 - ARPAE | 4.50 | 114.60 |
| 4 - ARPAP | 1.50 | 158.20 |
| 5 - UNIBO | 5.90 | 285.60 |
| 6 - ANBI | 5.00 | 29.20 |
| 7 - CMCC | | 173.60 |
| 8 - CMBO | 10.00 | 118.40 |
| 9 - ERSAF | 2.00 | 126.80 |
| 10 - LEGAMBIENTE | 8.60 | 167.10 |

| Staff effort per participant | | |
|--|-------------|----------------------------|
| <i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i> | | |
| Participant | WP11 | Total Person-Months |
| 10.1 - Legamb Lomb | | 47.60 |
| 10.2 - Legamb Veneto | | 47.60 |
| 10.3 - LEGAMB PVDA | | 47.60 |
| 10.4 - LEGAMB ER | | 47.60 |
| 11 - POLITO | 5.90 | 289.70 |
| 12 - SMAT | 0.90 | 57.80 |
| 13 - RER | 4.50 | 35.10 |
| 14 - RPiemonte | 4.50 | 45.10 |
| 15 - RLombardia | 4.50 | 47.80 |
| 16 - SOGESCA | 0.90 | 54.30 |
| 17 - ARPA Lombardia | 1.20 | 24.70 |
| 18 - ANBI-ER | 5.50 | 24.50 |
| 19 - ANBI Lombardia | 4.10 | 23.60 |
| 20 - ANBI PIEMONTE | 3.00 | 18.80 |
| 21 - ANBIVENETO | 4.50 | 24.00 |
| Total Person-Months | 104.70 | 2380.80 |

LIST OF DELIVERABLES

| Deliverables | | | | | | |
|---|--|------------------------|-------------------------|----------------------|----------------------------|-------------------------|
| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
| <i>The labels used mean:</i> | | | | | | |
| <i>Public — fully open (⚠ automatically posted online)</i> | | | | | | |
| <i>Sensitive — limited under the conditions of the Grant Agreement</i> | | | | | | |
| <i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i> | | | | | | |
| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D1.1 | Project work plan | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 3 |
| D1.2 | Project handbook | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 3 |
| D1.3 | Green Management Guidelines | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 3 |
| D1.4 | Data management plan | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 6 |
| D1.5 | External Advisory Board guidelines | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 6 |
| D1.6 | Agenda and minutes of project meetings | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 6 |
| D1.7 | Agenda, minutes and contributions of EAB meetings | WP1 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 12 |
| D1.8 | Progress report 1 | WP1 | 1 - ADBPO | R — Document, report | PU - Public | 18 |
| D1.9 | Progress report 2 | WP1 | 1 - ADBPO | R — Document, report | PU - Public | 55 |
| D1.10 | Progress report 3 | WP1 | 1 - ADBPO | R — Document, report | PU - Public | 91 |
| D2.1 | Analysis of present governance, legislation and planning tools | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 9 |
| D2.2 | Multilevel Governance Deal structure, programme and commitment (including the institution of the Adaptation Observatory) | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 18 |

| Deliverables | | | | | | |
|--|--|------------------------|-------------------------|----------------------------|----------------------------|-------------------------|
| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
| <i>The labels used mean:</i> | | | | | | |
| <i>Public — fully open (⚠ automatically posted online)</i> | | | | | | |
| <i>Sensitive — limited under the conditions of the Grant Agreement</i> | | | | | | |
| <i>EU classified —RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i> | | | | | | |
| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D2.3 | Brief Annual report on MGD activities and experience | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |
| D2.4 | Programmatic document of rules and data shared and made openly accessible (Data management plan) | WP2 | 1 - ADBPO | DMP — Data Management Plan | SEN - Sensitive | 18 |
| D2.5 | Programmatic document on the composition and roles of the task force on complementary funds | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 18 |
| D2.6 | Annual report on the allocation and use of complementary funds | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |
| D2.7 | Policy Recommendations at EU, National and Regional level | WP2 | 1 - ADBPO | R — Document, report | PU - Public | 96 |
| D2.8 | Final report and an action plan defining the long term funding streams for adaptation measures and technical tools implemented during the project, as well as the adoption of coordinated measures at District scale | WP2 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |
| D3.1 | Data Management Plan (DMP) | WP3 | 7 - CMCC | DMP — Data Management Plan | PU - Public | 6 |
| D3.2 | Data collection and review of their usability/ usefulness for the project | WP3 | 7 - CMCC | R — Document, report | PU - Public | 12 |

| Deliverables | | | | | | |
|--|--|------------------------|-------------------------|--|----------------------------|-------------------------|
| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
| <i>The labels used mean:</i> | | | | | | |
| <i>Public — fully open (⚠ automatically posted online)</i> | | | | | | |
| <i>Sensitive — limited under the conditions of the Grant Agreement</i> | | | | | | |
| <i>EU classified —RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i> | | | | | | |
| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D3.3 | Climate Risk Indices implemented at district level with the municipal granularity | WP3 | 7 - CMCC | R — Document, report | PU - Public | 30 |
| D3.4 | PO RIVER risk platform | WP3 | 7 - CMCC | DEC —Websites, patent filings, videos, etc | PU - Public | 48 |
| D3.5 | Report - Actual and potential use of the Po River Risk Data Platform - legacy and sustainability | WP3 | 7 - CMCC | R — Document, report | PU - Public | 96 |
| D4.1 | Mapping and analysis of district and regional stakeholders in water management | WP4 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 6 |
| D4.2 | CLIMAX PO Stakeholder Boards – engagement and contributions | WP4 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D4.3 | User Requirements for a CLIMAX PO Adaptation Platform | WP4 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 9 |
| D4.4 | LDN baseline and shared indicators | WP4 | 9 - ERSAF | R — Document, report | SEN - Sensitive | 24 |
| D4.5 | Capacity Building – contents and outputs | WP4 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D4.6 | Capacity Building programme for soil management in conservation agriculture | WP4 | 9 - ERSAF | R — Document, report | SEN - Sensitive | 24 |
| D4.7 | Capacity Building on Water and Adaptation in Metropolitan and Diffuse Urban Centres | WP4 | 1 - ADBPO | R — Document, report | PU - Public | 108 |

| Deliverables | | | | | | |
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| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
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| <i>Sensitive — limited under the conditions of the Grant Agreement</i> | | | | | | |
| <i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i> | | | | | | |
| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D5.1 | Hydrological, morphological and sedimentological data in the river reaches downstream of the reservoirs | WP5 | 11 - POLITO | DATA — data sets, microdata, etc | PU - Public | 36 |
| D5.2 | Future climate change impacts on water uses and multisector dynamics at district scale | WP5 | 7 - CMCC | R — Document, report | PU - Public | 36 |
| D5.3 | Proposal for an agreement for the management of regulated water resources in lakes at the district-scale | WP5 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 60 |
| D5.4 | Water Storage Plan | WP5 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 72 |
| D5.5 | Proposal for an agreement for the management of regulated water resources in lakes at the District-scale | WP5 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 72 |
| D5.6 | Future climate change impacts on water uses and multisector-dynamics at district scale | WP5 | 7 - CMCC | R — Document, report | PU - Public | 36 |
| D6.1 | Guidelines for the effective restoration of riparian vegetation in the context of climate change | WP6 | 11 - POLITO | R — Document, report | PU - Public | 72 |
| D6.2 | Review of ecosystem services, green infrastructure and assessment methods | WP6 | 7 - CMCC | R — Document, report | PU - Public | 24 |
| D6.3 | Assessment of ecosystem services | WP6 | 7 - CMCC | R — Document, report | PU - Public | 36 |

| Deliverables | | | | | | |
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| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
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| <i>Sensitive — limited under the conditions of the Grant Agreement</i> | | | | | | |
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| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D6.4 | Green infrastructure network analysis | WP6 | 7 - CMCC | R — Document, report | PU - Public | 48 |
| D6.5 | Definitive project | WP6 | 9 - ERSFAF | R — Document, report | PU - Public | 32 |
| D6.6 | Guidelines for the planning and recommendations for policy makers | WP6 | 1 - ADBPO | R — Document, report | PU - Public | 72 |
| D7.1 | Characterization of precipitation by means of statistical and hydrological approaches | WP7 | 3 - ARPAE | R — Document, report | SEN - Sensitive | 24 |
| D7.2 | Scenario based analysis for flash floods in urban environments reporting details about hydraulic and slope stability hazard zoning | WP7 | 3 - ARPAE | R — Document, report | SEN - Sensitive | 48 |
| D7.3 | Deployment of Modelling hydrological-hydraulic tools | WP7 | 3 - ARPAE | R — Document, report | SEN - Sensitive | 48 |
| D7.4 | Methodological Report for the choice of the most suitable hydrological-hydraulic modelling solutions in the planning, warning and management phases of the emergency – complemented by the guidelines for the management of extreme precipitation events. | WP7 | 3 - ARPAE | R — Document, report | SEN - Sensitive | 72 |
| D7.5 | Integrated monitoring and modeling system implemented | WP7 | 3 - ARPAE | OTHER | SEN - Sensitive | 36 |
| D7.6 | Decision support system implemented and Tested | WP7 | 3 - ARPAE | OTHER | SEN - Sensitive | 42 |

| Deliverables | | | | | | |
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| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
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| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D7.7 | Report on the use of the integrated system and the decision support system | WP7 | 7 - CMCC | R — Document, report | SEN - Sensitive | 48 |
| D7.8 | Recommendations about the adoption of the actions carried out within the WP7: design stage | WP7 | 7 - CMCC | R — Document, report | SEN - Sensitive | 36 |
| D7.9 | Recommendations about the adoption of the actions carried out within the WP7: implementation stage | WP7 | 7 - CMCC | R — Document, report | SEN - Sensitive | 60 |
| D8.1 | Internal report on adaptation actions already undertaken and possible improvements | WP8 | 6 - ANBI | R — Document, report | R-UE/EU-R - EU Classified | 24 |
| D8.2 | Good Practices for adaptive agriculture | WP8 | 6 - ANBI | R — Document, report | PU - Public | 72 |
| D8.3 | Guidelines for operational application and integration into policies and description of models and interoperability criteria | WP8 | 11 - POLITO | R — Document, report | PU - Public | 54 |
| D8.4 | Interim report on capacity building activities carried out | WP8 | 9 - ERSAF | R — Document, report | PU - Public | 36 |
| D8.5 | Final report on capacity building activities carried out | WP8 | 9 - ERSAF | R — Document, report | PU - Public | 72 |
| D8.6 | Report of modeling elaborations with current and future climate scenarios | WP8 | 9 - ERSAF | R — Document, report | PU - Public | 52 |

| Deliverables | | | | | | |
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| <i>Grant Preparation (Deliverables screen) — Enter the info.</i> | | | | | | |
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| <i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i> | | | | | | |
| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
| D8.7 | Report on implementation of LDN methodology | WP8 | 9 - ERSAF | R — Document, report | PU - Public | 36 |
| D8.8 | Implementation of LDN methodology | WP8 | 9 - ERSAF | R — Document, report | PU - Public | 72 |
| D8.9 | Guide lines for the planning and recommendations for policy makers | WP8 | 6 - ANBI | R — Document, report | PU - Public | 72 |
| D9.1 | Extract of the project data from the LIFE KPI webtool (month 9, mid term and end of the project) | WP9 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D9.2 | Socio economic Report (mid term) | WP9 | 5 - UNIBO | R — Document, report | PU - Public | 48 |
| D9.3 | Socio economic Report (final) | WP9 | 5 - UNIBO | R — Document, report | PU - Public | 102 |
| D9.4 | Evaluation Report on Climax Po economic impact | WP9 | 8 - CMBO | R — Document, report | PU - Public | 102 |
| D9.5 | collection of business models | WP9 | 8 - CMBO | R — Document, report | PU - Public | 102 |
| D9.6 | Periodic report on the status of the project | WP9 | 5 - UNIBO | R — Document, report | PU - Public | 108 |
| D9.7 | 3 reports with the results of the monitoring of the indicators at the end of each phase. | WP9 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D9.8 | Assessment and selection of the KPIs | WP9 | 5 - UNIBO | R — Document, report | PU - Public | 9 |
| D10.1 | Communication Plan | WP10 | 10 - LEGAMBIENTE | R — Document, report | SEN - Sensitive | 4 |
| D10.2 | Handbook of good practices | WP10 | 10 - LEGAMBIENTE | R — Document, report | PU - Public | 12 |

Deliverables

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EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision [2015/444](#)

| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
|----------------|---|-----------------|------------------|----------------------|---------------------|------------------|
| D10.3 | Press Review | WP10 | 10 - LEGAMBIENTE | R — Document, report | PU - Public | 108 |
| D10.4 | Dissemination Plan | WP10 | 10 - LEGAMBIENTE | R — Document, report | SEN - Sensitive | 16 |
| D11.1 | Sustainability and Exploitation plan | WP11 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |
| D11.2 | Report on the contributions to the update of the Po RBMP and other district plans | WP11 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D11.3 | Report on the contributions to the update of the NAS and NAP | WP11 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D11.4 | Report on the exploitation of project results at district level | WP11 | 1 - ADBPO | R — Document, report | PU - Public | 108 |
| D11.5 | Replication plan | WP11 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |
| D11.6 | Report on peer-to-peer, replication and exchange activities | WP11 | 1 - ADBPO | R — Document, report | SEN - Sensitive | 108 |

Deliverable D1.1 – Project work plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D1.1 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Project work plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 3 | Work Package No | WP1 |

| |
|--|
| Description |
| For the implementation of the project, it is important to make a more fine-grained planning that is consistent with the DoA. The fine-grained planning must be updated as the project proceeds, and it must take into account any contingency measures, if required. The purpose of D1.1 is to document the fine-grained planning. |

Deliverable D1.2 – Project handbook

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D1.2 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Project handbook | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 3 | Work Package No | WP1 |

| |
|--|
| Description |
| It describes documentation and communication standards that are to be used within the project. Particularly, it serves as a reference for 1) creating project related documents, including publications, project reports, work package progress reports, minutes of meetings and more; 2) communication between partners; and 3) retrieving and storing documents on the project's document server. Also, it serves as a reference for quality management of deliverables and for certain decision-making processes. |

Deliverable D1.3 – Green Management Guidelines

| | | | |
|---------------------------|-----------------------------|----------------------------|-----------------|
| Deliverable Number | D1.3 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Green Management Guidelines | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 3 | Work Package No | WP1 |

| |
|---|
| Description |
| Procedures and criteria to be followed and/or to be complied with for organisation of events, travels and accomodation, meetings and purchase of goods and services in a view to responsible green management |

Deliverable D1.4 – Data management plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D1.4 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Data management plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 6 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| This document describes how data will be handled during and after the end of the project, what data will be collected, processed and / or generated, which methodology and standards will be applied, whether data will be shared / made open access, and how data will be curated and preserved (including after the end of the project). Special attention will be paid to security and compliance aspects, including the GDPR | | | |

Deliverable D1.5 – External Advisory Board guidelines

| | | | |
|---------------------------|------------------------------------|----------------------------|-----------------|
| Deliverable Number | D1.5 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | External Advisory Board guidelines | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 6 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| List of invited experts, rules of the game | | | |

Deliverable D1.6 – Agenda and minutes of project meetings

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D1.6 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Agenda and minutes of project meetings | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 6 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| Agenda, presence list, minutes of meetings | | | |

Deliverable D1.7 – Agenda, minutes and contributions of EAB meetings

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D1.7 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Agenda, minutes and contributions of EAB meetings | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 12 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| Agenda, presence list, minutes of meetings, contributions from board members | | | |

Deliverable D1.8 – Progress report 1

| | | | |
|---------------------------|----------------------|----------------------------|-------------|
| Deliverable Number | D1.8 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Progress report 1 | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 18 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| Activity Report depicting the project's outcome related to its planned work packages, the description of general project activities in the reporting period, the description of achieved milestones as well as the description of irregularities and delays in implementation. | | | |

Deliverable D1.9 – Progress report 2

| | | | |
|---------------------------|----------------------|----------------------------|-------------|
| Deliverable Number | D1.9 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Progress report 2 | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 55 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| Activity Report depicting the project's outcome related to its planned work packages, the description of general project activities in the reporting period, the description of achieved milestones as well as the description of irregularities and delays in implementation. | | | |

Deliverable D1.10 – Progress report 3

| | | | |
|---------------------------|----------------------|----------------------------|-------------|
| Deliverable Number | D1.10 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Progress report 3 | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 91 | Work Package No | WP1 |

| Description | | | |
|--|--|--|--|
| Activity Report depicting the project's outcome related to its planned work packages, the description of general project activities in the reporting period, the description of achieved milestones as well as the description of irregularities and delays in implementation. | | | |

Deliverable D2.1 – Analysis of present governance, legislation and planning tools

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.1 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Analysis of present governance, legislation and planning tools | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 9 | Work Package No | WP2 |

| Description | | | |
|---|--|--|--|
| Report on present Governance of water resources and adaptation to climate change at District level, including Regional and Local roles, legislation, planning and monitoring tools with SWOT analysis Italian + Summary in English | | | |

Deliverable D2.2 – Multilevel Governance Deal structure, programme and commitment (including the institution of the Adaptation Observatory)

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.2 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Multilevel Governance Deal structure, programme and commitment (including the institution of the Adaptation Observatory) | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 18 | Work Package No | WP2 |

| |
|--|
| Description |
| Report with guidelines for the integrated, multi-level management of climate adaptation at district level and formal commitments. Definition of the Adaptation Observatory with shared measures and monitoring indicators Italian + Summary in English |

Deliverable D2.3 – Brief Annual report on MGD activities and experience

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.3 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Brief Annual report on MGD activities and experience | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP2 |

| |
|---|
| Description |
| Report, including agendas, minutes and presence list of meetings Italian + Summary in English Due date: 24, 36, 48, 60, 72, 84, 96, 108 |

Deliverable D2.4 – Programmatic document of rules and data shared and made openly accessible (Data management plan)

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.4 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Programmatic document of rules and data shared and made openly accessible (Data management plan) | | |
| Type | DMP — Data Management Plan | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 18 | Work Package No | WP2 |

| |
|--|
| Description |
| Report Italian + Summary in English |

Deliverable D2.5 – Programmatic document on the composition and roles of the task force on complementary funds

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D2.5 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Programmatic document on the composition and roles of the task force on complementary funds | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 18 | Work Package No | WP2 |

| |
|--|
| Description |
| Report Italian + Summary in English |

Deliverable D2.6 – Annual report on the allocation and use of complementary funds

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.6 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Annual report on the allocation and use of complementary funds | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP2 |

| |
|---|
| Description |
| Report Italian + Summary in English Due Date (in months): 24, 36, 48, 60, 72, 84, 96, 108 |

Deliverable D2.7 – Policy Recommendations at EU, National and Regional level

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D2.7 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Policy Recommendations at EU, National and Regional level | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 96 | Work Package No | WP2 |

| |
|---|
| Description |
| Report with indications and opportunities for institutionalisation of climate adaptation in plans, strategies and policies at river basin district level National and Regional recommendations: Italian + Summary in English EU recommendations : English + summary in Italian Due Date (in months): 36, 72, 96 |

Deliverable D2.8 – Final report and an action plan defining the long term funding streams for adaptation measures and technical tools implemented during the project, as well as the adoption of coordinated measures at District scale

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D2.8 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Final report and an action plan defining the long term funding streams for adaptation measures and technical tools implemented during the project, as well as the adoption of coordinated measures at District scale | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP2 |

| |
|---|
| Description |
| Collection of the work of the MGD task force on public and private funding for adaptation in coordination with the other technical task forces, with a an action plan for follow up activities after the end of the project Italian + Summary in English |

Deliverable D3.1 – Data Management Plan (DMP)

| | | | |
|---------------------------|----------------------------|----------------------------|-------------|
| Deliverable Number | D3.1 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Data Management Plan (DMP) | | |
| Type | DMP — Data Management Plan | Dissemination Level | PU - Public |
| Due Date (month) | 6 | Work Package No | WP3 |

| |
|---|
| Description |
| DMP will describe what data will be acquired or produced, how the data will be managed, described, and stored, what standards you will use, and how data will be handled and protected during and after the completion of the project. Language - English. Format - pdf. |

Deliverable D3.2 – Data collection and review of their usability/usefulness for the project

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D3.2 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Data collection and review of their usability/usefulness for the project | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 12 | Work Package No | WP3 |

| |
|---|
| Description |
| Report - Assessment of usability, usefulness and potential use of existing climate risk-related data for the purpose of the project English + Summary in Italian |

Deliverable D3.3 – Climate Risk Indices implemented at district level with the municipal granularity

| | | | |
|---------------------------|------|-------------------------|---------|
| Deliverable Number | D3.3 | Lead Beneficiary | 7. CMCC |
|---------------------------|------|-------------------------|---------|

| | | | |
|-------------------------|---|----------------------------|-------------|
| Deliverable Name | Climate Risk Indices implemented at district level with the municipal granularity | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 30 | Work Package No | WP3 |

| |
|--|
| Description |
| Report and underpinning data describing the use cases and case studies of the CRIs |

Deliverable D3.4 – PO RIVER risk platform

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D3.4 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | PO RIVER risk platform | | |
| Type | DEC —Websites, patent filings, videos, etc | Dissemination Level | PU - Public |
| Due Date (month) | 48 | Work Package No | WP3 |

| |
|---|
| Description |
| Online platform with facilitated access to data, information and indicators from T2.1-T3.3, in italian language (GUI) |

Deliverable D3.5 – Report - Actual and potential use of the Po River Risk Data Platform - legacy and sustainability

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D3.5 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Report - Actual and potential use of the Po River Risk Data Platform - legacy and sustainability | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 96 | Work Package No | WP3 |

| |
|---|
| Description |
| Report on how the data platform has been used for the purpose of the project in other WP8 as well as legacy and sustainability analysis |

Deliverable D4.1 – Mapping and analysis of district and regional stakeholders in water management

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D4.1 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Mapping and analysis of district and regional stakeholders in water management | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 6 | Work Package No | WP4 |

| |
|---|
| Description |
| Report on present stakeholders in water management and adaptation to climate change at District level, including Regional and Local players, with SWOT analysis Italian + Summary in English |

Deliverable D4.2 – CLIMAX PO Stakeholder Boards – engagement and contributions

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D4.2 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | CLIMAX PO Stakeholder Boards – engagement and contributions | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP4 |

| |
|---|
| Description |
| 1 report per phase for each of the 5 stakeholder boards about the involvement of stakeholders in the implementation of the pilot actions and of the NAS with contributions and lessons learnt |
| Due Data (in months):36, 72, 108 |

Deliverable D4.3 – User Requirements for a CLIMAX PO Adaptation Platform

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D4.3 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | User Requirements for a CLIMAX PO Adaptation Platform | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 9 | Work Package No | WP4 |

| |
|---|
| Description |
| Report including the definition of data, services and interface for the CLIMAX PO adaptation platform that will be developed in WP3 |

Deliverable D4.4 – LDN baseline and shared indicators

| | | | |
|---------------------------|------------------------------------|----------------------------|-----------------|
| Deliverable Number | D4.4 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | LDN baseline and shared indicators | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 24 | Work Package No | WP4 |

| |
|---|
| Description |
| Report including indicators and the elaborated LDN baseline |

Deliverable D4.5 – Capacity Building – contents and outputs

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D4.5 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Capacity Building – contents and outputs | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP4 |

| |
|---|
| Description |
| At least 1 report per project phase with target groups, participants, contents, contributions, good and bad practices |

| |
|-----------------------------------|
| Due Date (in months): 36, 72, 108 |
|-----------------------------------|

Deliverable D4.6 – Capacity Building programme for soil management in conservation agriculture

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D4.6 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Capacity Building programme for soil management in conservation agriculture | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 24 | Work Package No | WP4 |

Description

Training and technical refresher programme (based on good practices) lasting 4 years, dedicated to agricultural operators (farmers, contractors), consultants, companies, farming schools and institutional stakeholders with competences on agriculture. The course aims at allowing the implementation of a permanent infrastructure to support technical assistance in the agricultural sector

Deliverable D4.7 – Capacity Building on Water and Adaptation in Metropolitan and Diffuse Urban Centres

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D4.7 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Capacity Building on Water and Adaptation in Metropolitan and Diffuse Urban Centres | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP4 |

Description

At least 1 report per project phase with target groups, participants, contents, contributions, good and bad practices

Due Date (in months): 36, 72, 108

Deliverable D5.1 – Hydrological, morphological and sedimentological data in the river reaches downstream of the reservoirs

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D5.1 | Lead Beneficiary | 11. POLITO |
| Deliverable Name | Hydrological, morphological and sedimentological data in the river reaches downstream of the reservoirs | | |
| Type | DATA — data sets, microdata, etc | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP5 |

Description

Construction of an open-access database of collected data

Deliverable D5.2 – Future climate change impacts on water uses and multisector dynamics at district scale

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D5.2 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Future climate change impacts on water uses and multisector dynamics at district scale | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP5 |

| |
|--|
| Description |
| A technical report defining current and future water uses In Italian + summary in English |

Deliverable D5.3 – Proposal for an agreement for the management of regulated water resources in lakes at the district-scale

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D5.3 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Proposal for an agreement for the management of regulated water resources in lakes at the district-scale | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 60 | Work Package No | WP5 |

| |
|--|
| Description |
| A document for lake managers and stakeholders to support management simplification and conflict resolution In Italian |

Deliverable D5.4 – Water Storage Plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D5.4 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Water Storage Plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 72 | Work Package No | WP5 |

| |
|--|
| Description |
| A technical document on the integrated management of water implementing adaptation strategies to climate change In Italian + summary in English |

Deliverable D5.5 – Proposal for an agreement for the management of regulated water resources in lakes at the District-scale

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D5.5 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Proposal for an agreement for the management of regulated water resources in lakes at the District-scale | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |

| | | | |
|-------------------------|----|------------------------|-----|
| Due Date (month) | 72 | Work Package No | WP5 |
|-------------------------|----|------------------------|-----|

| |
|------------------------------|
| Description |
| Italian + summary in English |

Deliverable D5.6 – Future climate change impacts on water uses and multisector-dynamics at district scale

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D5.6 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Future climate change impacts on water uses and multisector-dynamics at district scale | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP5 |

| |
|------------------------------|
| Description |
| Italian + summary in English |

Deliverable D6.1 – Guidelines for the effective restoration of riparian vegetation in the context of climate change

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D6.1 | Lead Beneficiary | 11. POLITO |
| Deliverable Name | Guidelines for the effective restoration of riparian vegetation in the context of climate change | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP6 |

| |
|--|
| Description |
| The report will help the design of effective vegetated buffer zones in riparian areas, and will provide indications for updating current management tools (e.g. Piani di Gestione della Vegetazione Perifluviale). The report will also indicate potential evolution trends of riparian vegetation and of the related ecosystem services as a consequence of projected climate changes. Format: Electronic Language: Italian + Summary in English Approximate number of pages: 50-100 |

Deliverable D6.2 – Review of ecosystem services, green infrastructure and assessment methods

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D6.2 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Review of ecosystem services, green infrastructure and assessment methods | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 24 | Work Package No | WP6 |

| |
|---|
| Description |
| The report will summarise the findings of desk review, accompanied by stakeholders indications, about primary |

ecosystem services and existing green infrastructure in the low-lying Po River Basin District area. The report will also include a review and collection of methods for ecosystem services assessment.

Format: Electronic

Language: English

Deliverable D6.3 – Assessment of ecosystem services

| | | | |
|---------------------------|----------------------------------|----------------------------|-------------|
| Deliverable Number | D6.3 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Assessment of ecosystem services | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP6 |

Description

The report will present the result of assessment analysis of ecosystem services provided by selected green infrastructure in Po River plain.

Format: Electronic

Language: English

Deliverable D6.4 – Green infrastructure network analysis

| | | | |
|---------------------------|---------------------------------------|----------------------------|-------------|
| Deliverable Number | D6.4 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Green infrastructure network analysis | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 48 | Work Package No | WP6 |

Description

The report will present the result of green infrastructure network analysis for potential network improvement and impacts.

Format: Electronic

Language: English

Deliverable D6.5 – Definitive project

| | | | |
|---------------------------|----------------------|----------------------------|-------------|
| Deliverable Number | D6.5 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Definitive project | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 32 | Work Package No | WP6 |

Description

Technical report in PDF format and cartography (in Italian)

Deliverable D6.6 – Guidelines for the planning and recommendations for policy makers

| | | | |
|---------------------------|---|-------------------------|----------|
| Deliverable Number | D6.6 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Guidelines for the planning and recommendations for policy makers | | |

| | | | |
|-------------------------|----------------------|----------------------------|-------------|
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP6 |

| |
|---|
| Description |
| National and Regional Recommendations: Italian + summary in English EU recommendations: English + summary in Italian |

Deliverable D7.1 – Characterization of precipitation by means of statistical and hydrological approaches

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D7.1 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Characterization of precipitation by means of statistical and hydrological approaches | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 24 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.2 – Scenario based analysis for flash floods in urban environments reporting details about hydraulic and slope stability hazard zoning

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.2 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Scenario based analysis for flash floods in urban environments reporting details about hydraulic and slope stability hazard zoning | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 48 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.3 – Deployment of Modelling hydrological-hydraulic tools

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.3 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Deployment of Modelling hydrological-hydraulic tools | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 48 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.4 – Methodological Report for the choice of the most suitable hydrological-hydraulic modelling solutions in the planning, warning and management phases of the emergency – complemented by the guidelines for the management of extreme precipitation events.

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D7.4 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Methodological Report for the choice of the most suitable hydrological-hydraulic modelling solutions in the planning, warning and management phases of the emergency – complemented by the guidelines for the management of extreme precipitation events. | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 72 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.5 – Integrated monitoring and modeling system implemented

| | | | |
|---------------------------|---|----------------------------|-----------------|
| Deliverable Number | D7.5 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Integrated monitoring and modeling system implemented | | |
| Type | OTHER | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 36 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.6 – Decision support system implemented and Tested

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.6 | Lead Beneficiary | 3. ARPAE |
| Deliverable Name | Decision support system implemented and Tested | | |
| Type | OTHER | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 42 | Work Package No | WP7 |

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.7 – Report on the use of the integrated system and the decision support system

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.7 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Report on the use of the integrated system and the decision support system | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |

| | | | |
|-------------------------|----|------------------------|-----|
| Due Date (month) | 48 | Work Package No | WP7 |
|-------------------------|----|------------------------|-----|

| |
|--|
| Description |
| Report Italian + summary in English |

Deliverable D7.8 – Recommendations about the adoption of the actions carried out within the WP7: design stage

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.8 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Recommendations about the adoption of the actions carried out within the WP7: design stage | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 36 | Work Package No | WP7 |

| |
|---|
| Description |
| National and Regional Recommendations: Italian + summary in English |

Deliverable D7.9 – Recommendations about the adoption of the actions carried out within the WP7: implementation stage

| | | | |
|---------------------------|--|----------------------------|-----------------|
| Deliverable Number | D7.9 | Lead Beneficiary | 7. CMCC |
| Deliverable Name | Recommendations about the adoption of the actions carried out within the WP7: implementation stage | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 60 | Work Package No | WP7 |

| |
|---|
| Description |
| National and Regional Recommendations: Italian + summary in English |

Deliverable D8.1 – Internal report on adaptation actions already undertaken and possible improvements

| | | | |
|---------------------------|--|----------------------------|---------------------------|
| Deliverable Number | D8.1 | Lead Beneficiary | 6. ANBI |
| Deliverable Name | Internal report on adaptation actions already undertaken and possible improvements | | |
| Type | R — Document, report | Dissemination Level | R-UE/EU-R - EU Classified |
| Due Date (month) | 24 | Work Package No | WP8 |

| |
|---|
| Description |
| Description of the adaptive measured already undertaken in agriculture and foreseen improvements. Italian+summary in english |

Deliverable D8.2 – Good Practices for adaptive agriculture

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D8.2 | Lead Beneficiary | 6. ANBI |
| Deliverable Name | Good Practices for adaptive agriculture | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP8 |

| |
|--|
| Description |
| Good practices for adaptive agriculture. The collection of good practice will be presented like an EIP Agri document (FG paper or collection of Mini Papers) Italian+summary in english |

Deliverable D8.3 – Guidelines for operational application and integration into policies and description of models and interoperability criteria

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D8.3 | Lead Beneficiary | 11. POLITO |
| Deliverable Name | Guidelines for operational application and integration into policies and description of models and interoperability criteria | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 54 | Work Package No | WP8 |

| |
|---|
| Description |
| Guidelines for operational application of integrated and interoperable models. Italian+ summary in English |

Deliverable D8.4 – Interim report on capacity building activities carried out

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D8.4 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Interim report on capacity building activities carried out | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP8 |

| |
|--|
| Description |
| Title and location of training/demonstration events and number, type of participants Italian + summary in English |

Deliverable D8.5 – Final report on capacity building activities carried out

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D8.5 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Final report on capacity building activities carried out | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP8 |

| Description | |
|---|--|
| Full report of the realization of training/demonstration events and number, type of participants. Italian + summary in English | |

Deliverable D8.6 – Report of modeling elaborations with current and future climate scenarios

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D8.6 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Report of modeling elaborations with current and future climate scenarios | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 52 | Work Package No | WP8 |

| Description | |
|---|--|
| Document with the results of model simulations in particular related to the parameters considered: crop yields, effect of water availability, increase in carbon content. Italian + summary in English | |

Deliverable D8.7 – Report on implementation of LDN methodology

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D8.7 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Report on implementation of LDN methodology | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP8 |

| Description | |
|---|--|
| Description and implementation of information bases, meetings with local stakeholders, first application of the methodology Italian + summary in English | |

Deliverable D8.8 – Implementation of LDN methodology

| | | | |
|---------------------------|-----------------------------------|----------------------------|-------------|
| Deliverable Number | D8.8 | Lead Beneficiary | 9. ERSAF |
| Deliverable Name | Implementation of LDN methodology | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP8 |

| Description | |
|---|--|
| Meeting with local stakeholders and application of final methodology. Italian + summary in English | |

Deliverable D8.9 – Guide lines for the planning and raccomandations for policy makers

| | | | |
|---------------------------|--|-------------------------|---------|
| Deliverable Number | D8.9 | Lead Beneficiary | 6. ANBI |
| Deliverable Name | Guide lines for the planning and raccomandations for policy makers | | |

| | | | |
|-------------------------|----------------------|----------------------------|-------------|
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 72 | Work Package No | WP8 |

| |
|---|
| Description |
| National and Regional Recommendations: Italian + summary in English EU recommendations: English + summary in Italian. Lead Beneficiary ANBI/ERSAF |

Deliverable D9.1 – Extract of the project data from the LIFE KPI webtool (month 9, mid term and end of the project)

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D9.1 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Extract of the project data from the LIFE KPI webtool (month 9, mid term and end of the project) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP9 |

| |
|---|
| Description |
| Extract of the project data from the LIFE KPI webtool (month 9, end of each phase and end of the project) |

Deliverable D9.2 – Socio economic Report (mid term)

| | | | |
|---------------------------|----------------------------------|----------------------------|-------------|
| Deliverable Number | D9.2 | Lead Beneficiary | 5. UNIBO |
| Deliverable Name | Socio economic Report (mid term) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 48 | Work Package No | WP9 |

| |
|-------------------------------|
| Description |
| Document (digital), IT and EN |

Deliverable D9.3 – Socio economic Report (final)

| | | | |
|---------------------------|-------------------------------|----------------------------|-------------|
| Deliverable Number | D9.3 | Lead Beneficiary | 5. UNIBO |
| Deliverable Name | Socio economic Report (final) | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 102 | Work Package No | WP9 |

| |
|---|
| Description |
| Document (digital and paper), IT and EN |

Deliverable D9.4 – Evaluation Report on Climax Po economic impact

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D9.4 | Lead Beneficiary | 8. CMBO |
| Deliverable Name | Evaluation Report on Climax Po economic impact | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 102 | Work Package No | WP9 |

| |
|---|
| Description |
| Document (digital and paper), IT and EN |

Deliverable D9.5 – collection of business models

| | | | |
|---------------------------|-------------------------------|----------------------------|-------------|
| Deliverable Number | D9.5 | Lead Beneficiary | 8. CMBO |
| Deliverable Name | collection of business models | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 102 | Work Package No | WP9 |

| |
|---|
| Description |
| Document (digital and paper), IT and EN |

Deliverable D9.6 – Periodic report on the status of the project

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D9.6 | Lead Beneficiary | 5. UNIBO |
| Deliverable Name | Periodic report on the status of the project | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP9 |

| |
|--|
| Description |
| Document (digital and paper), IT and EN. Due date (in months): 18 and every 18 months |

Deliverable D9.7 – 3 reports with the results of the monitoring of the indicators at the end of each phase.

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D9.7 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | 3 reports with the results of the monitoring of the indicators at the end of each phase. | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP9 |

| |
|--|
| Description |
| Document (digital and paper), IT and EN. |

Due date (in months): 36 – 72 - 108

Deliverable D9.8 – Assessment and selection of the KPIs

| | | | |
|---------------------------|--------------------------------------|----------------------------|-------------|
| Deliverable Number | D9.8 | Lead Beneficiary | 5. UNIBO |
| Deliverable Name | Assessment and selection of the KPIs | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 9 | Work Package No | WP9 |

Description

Document (digital and paper), IT and EN

Deliverable D10.1 – Communication Plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D10.1 | Lead Beneficiary | 10. LEGAMBIENTE |
| Deliverable Name | Communication Plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 4 | Work Package No | WP10 |

Description

The plan will state how the most effective communication can be done and include a strategy, clear communication objectives, target groups, messages and means to communicate the purpose and results of the actions.
Electronic Format/Italian

Deliverable D10.2 – Handbook of good practices

| | | | |
|---------------------------|----------------------------|----------------------------|-----------------|
| Deliverable Number | D10.2 | Lead Beneficiary | 10. LEGAMBIENTE |
| Deliverable Name | Handbook of good practices | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 12 | Work Package No | WP10 |

Description

The document collects the best practices on adaptation to climate change successfully tested by public bodies both in Italy and in the rest of Europe.
Electronic Format/Italian

Deliverable D10.3 – Press Review

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D10.3 | Lead Beneficiary | 10. LEGAMBIENTE |
| Deliverable Name | Press Review | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP10 |

| Description |
|---|
| The document collects the news and the press articles regarding the project. Electronic Format/Italian |

Deliverable D10.4 – Dissemination Plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D10.4 | Lead Beneficiary | 10. LEGAMBIENTE |
| Deliverable Name | Dissemination Plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 16 | Work Package No | WP10 |

| Description |
|--|
| The plan will contain a set of and of measures planned for the dissemination of project results Electronic Format/Italian |

Deliverable D11.1 – Sustainability and Exploitation plan

| | | | |
|---------------------------|--------------------------------------|----------------------------|-----------------|
| Deliverable Number | D11.1 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Sustainability and Exploitation plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP11 |

| Description |
|--|
| Initial draft and following updates of a plan aimed at identifying the main project achievements to exploit and common guidelines with general principles for developing exploitable and sustainable outcomes Italian + English summary Due Date (in months): 12,36,72,108 |

Deliverable D11.2 – Report on the contributions to the update of the Po RBMP and other district plans

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D11.2 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Report on the contributions to the update of the Po RBMP and other district plans | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP11 |

| Description |
|---|
| Periodic report drafted at the end of each project phase with a brief summary of the contributions to the Po RBMP and other district level plans in terms of climate adaptation Italian + English summary Due Date (in months): 36, 72, 108 |

Deliverable D11.3 – Report on the contributions to the update of the NAS and NAP

| | | | |
|---------------------------|--|----------------------------|-------------|
| Deliverable Number | D11.3 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Report on the contributions to the update of the NAS and NAP | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP11 |

| |
|--|
| Description |
| Periodic report drafted at the end of each project phase with a brief summary of the contributions to the possible updates of the NAS and NAP in terms of improved water management for climate adaptation Italian + English summary Due Date (in months): 36, 72, 108 |

Deliverable D11.4 – Report on the exploitation of project results at district level

| | | | |
|---------------------------|---|----------------------------|-------------|
| Deliverable Number | D11.4 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Report on the exploitation of project results at district level | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 108 | Work Package No | WP11 |

| |
|--|
| Description |
| Periodic report drafted at the end of each project phase with a brief summary of the contributions to the possible updates of the NAS and NAP in terms of improved water management for climate adaptation Italian + English summary Due Date (in months): 72, 108 |

Deliverable D11.5 – Replication plan

| | | | |
|---------------------------|----------------------|----------------------------|-----------------|
| Deliverable Number | D11.5 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Replication plan | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP11 |

| |
|---|
| Description |
| Initial draft and following updates of a plan aimed at identifying the main project achievements to replicate at National and EU level with guidelines to do so Italian + English summary Due Date (in months): 12, 36, 72, 108 |

Deliverable D11.6 – Report on peer-to-peer, replication and exchange activities

| | | | |
|---------------------------|---|-------------------------|----------|
| Deliverable Number | D11.6 | Lead Beneficiary | 1. ADBPO |
| Deliverable Name | Report on peer-to-peer, replication and exchange activities | | |

| | | | |
|-------------------------|----------------------|----------------------------|-----------------|
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 108 | Work Package No | WP11 |

| Description |
|---|
| <p>Periodic report drafted at the end of each project phase on the peer-to-peer exchanges organised with Italian and EU river basin authorities Italian + English summary</p> <p>Due Date (in months): 36, 72, 108</p> |

LIST OF MILESTONES

| Milestones | | | | | |
|--|---|------------------------|-------------------------|---|-------------------------|
| <i>Grant Preparation (Milestones screen) — Enter the info.</i> | | | | | |
| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
| 1 | Rules of the game shared with consortium members | WP1 | 1-ADBPO | Minutes of Kick off meeting (part of D1.6) | 3 |
| 2 | External Advisory Board 1st meeting | WP1 | 1-ADBPO | Minutes of EAB meeting | 12 |
| 3 | Draft analysis of present legislation and planning tools | WP2 | 1-ADBPO | Draft document D2.1 | 6 |
| 4 | Draft of Multilevel Governance Deal structure and programme document, including the institution of the Adaptation Observatory | WP2 | 1-ADBPO | Draft document D2.2 | 12 |
| 5 | Coordination of complementary funding started | WP2 | 1-ADBPO | Minutes of meetings | 24 |
| 6 | Successful coordination of complementary funding for adaptation measures | WP2 | 1-ADBPO | D2.5 | 72 |
| 7 | Draft data collection report | WP3 | 7-CMCC | Report shared on the project website and circulated among the project partners and stakeholders | 6 |
| 8 | Specification of key composite risk indices | WP3 | 7-CMCC | Report shared on the project website and circulated among the project partners and stakeholders | 18 |
| 9 | Mock-up version of the data platform | WP3 | 7-CMCC | Shared via project website and presented at project meetings | 36 |
| 10 | Obtaining from letters of support | WP4 | 1-ADBPO | List of support letter undersigned | 9 |
| 11 | Setting up of the Stakeholder Boards | WP4 | 1-ADBPO | List of involved stakeholders / minutes of first meeting | 9 |

| Milestones | | | | | |
|--|---|------------------------|-------------------------|--|-------------------------|
| <i>Grant Preparation (Milestones screen) — Enter the info.</i> | | | | | |
| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
| 12 | Selection of Shared LDN indicators | WP4 | 9-ERSAF | Draft of D4.4 | 12 |
| 13 | Hydrological modeling setup for water resource management in Po river sub-basin | WP5 | 1-ADBPO | Validation of the model in the sub-basins of great Alpine lakes inflows | 24 |
| 14 | Assessment of current water uses and requirements | WP5 | 1-ADBPO | Database of withdrawals and assessment of water requirements | 24 |
| 15 | Set-up turbidimeters | WP5 | 11-POLITO | Photographic and technical documentation | 18 |
| 16 | Strategies in the water management of Alpine lakes | WP5 | 1-ADBPO | Model results simulating the effects of different strategies of water management | 60 |
| 17 | Start of numerical modeling | WP6 | 11-POLITO | Maps of predicted flooded areas will be available | 42 |
| 18 | Start of data analysis | WP6 | 11-POLITO | Full dataset available | 61 |
| 19 | Stakeholder Survey | WP6 | 7-CMCC | Survey results | 18 |
| 20 | Starting of sharing process | WP6 | 9-ERSAF | First meeting report | 20 |
| 21 | Decision-making Conference of Services | WP6 | 9-ERSAF | Convocation of the Conference of Services | 36 |
| 22 | Executive project | WP6 | 9-ERSAF | Delivery to the lead partner | 42 |
| 23 | Start of works | WP6 | 9-ERSAF | Official act of start of works | 50 |
| 24 | Capacity building started | WP4 | 1-ADBPO | Reports of capacity building sessions in D4.5 | 30 |
| 25 | Input data, metadata collected and processed | WP7 | 3-ARPAE | Report | 12 |
| 26 | Beta version of tools for precipitation assessment | WP7 | 3-ARPAE | Tools | 24 |
| 27 | LiveStorm (ARPA Piemonte) Tool adopted in other web-platform used in the District | WP7 | 3-ARPAE | Tool | 36 |
| 28 | First test of the integrated modeling and monitoring system | WP7 | 7-CMCC | The outputs of the modelling system will be compared against observations | 30 |

| Milestones | | | | | |
|--|--|------------------------|-------------------------|---|-------------------------|
| <i>Grant Preparation (Milestones screen) — Enter the info.</i> | | | | | |
| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
| 29 | First test with users of the Decision Support System | WP7 | 7-CMCC | The outputs of the EWS and DSS will be compared against objective evaluation of the impacts | 40 |
| 30 | Draft of Report about the lessons learnt in the design stage | WP7 | 7-CMCC | Report | 30 |
| 31 | Draft of Report on lessons learnt in the implementation stage of D.T.3.1.2 | WP7 | 7-CMCC | Report | 54 |
| 32 | Activities started | WP8 | 6-ANBI | Meetings short report | 18 |
| 33 | Existing examples of smart governance identified | WP8 | 6-ANBI | Dataset | 12 |
| 34 | Knowledge updating | WP8 | 9-ERSAF | Collection of documents (at least 20) | 30 |
| 35 | Demonstration visits launched | WP8 | 9-ERSAF | Date of realization. | 36 |
| 36 | Dataset acquisition for modelling applications | WP8 | 9-ERSAF | Completeness of data | 43 |
| 37 | Collection of starting material supporting policy recommendation | WP8 | 9-ERSAF | List | 42 |
| 38 | Set of sectorial KPIs for the evaluation of project impacts | WP9 | 5-UNIBO | Report | 9 |
| 39 | Revision sectorial KPIs for the evaluation of project impacts | WP9 | 5-UNIBO | Report Date (month): 36, 72, 108 | 108 |
| 40 | Set of sectorial KPIs for the evaluation of NAS implementation | WP9 | 1-ADBPO | Report | 9 |
| 41 | Set KPIs for co-benefits indicators to Nature and Biodiversity | WP9 | 5-UNIBO | Report | 12 |
| 42 | Starting of the awareness campaign for public authorities | WP10 | 10-LEGAMBIENTE | Press articles Program of seminars Presence | 12 |

| Milestones | | | | | |
|--|--|------------------------|-------------------------|---|-------------------------|
| <i>Grant Preparation (Milestones screen) — Enter the info.</i> | | | | | |
| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
| | | | | Sheets Publication of related deliverables Pictures of events | |
| 43 | LMS EDUCLIMA launch | WP10 | 11-POLITO | Press articles | 48 |
| 44 | Starting of the awareness campaign for schools | WP10 | 10-LEGAMBIENTE | Press articles Presence Sheets Publication of related deliverables Pictures of events | 54 |
| 45 | Replication River Basin Districts shortlisted | WP11 | 1-ADBPO | D11.6 | 12 |
| 46 | Contribution to the update of the Po River Basin Management Plan drafted | WP11 | 1-ADBPO | Draft D11.2 | 60 |
| 47 | Initial expressions of interest in exploitation of pilot action results | WP11 | 1-ADBPO | Draft D11.4 with expressions of interest received | 84 |

LIST OF CRITICAL RISKS

| Critical risks & risk management strategy | | | |
|--|---|---------------------------|---|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| 1 | Delays due to the complex governance of climate change and related planning in the Po River Basin District due to the large number of actors and to the overlapping of national and regional legislation Likelihood: medium; Impact: high; | WP2 | At proposal stage: direct and indirect (letters of support) engagement of most of the main actors, including 4 Regional Governments and environmental agencies, ADBPO and AIPO and ANBI (National and Regional Associations of Consortia for Land Reclamation, Irrigation and Improvement) At implementation stage: mapping the relevant legislation, planning tools and roles will provide support to all players involved and should motivate them. At MGD level, clear information, engagement and capacity building and roles in the thematic task forces will |

| Critical risks & risk management strategy | | | |
|--|--|---------------------------|---|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| | | | support the commitment and the enforcement of the agreements that will be signed in the first phase of the project implementation; bottom-up collection of information on legislation and planning tools from the very beginning of the project implementation in order to limit the impact related to delays in the contacts with relevant local/regional authorities Likelihood: low; impact: low |
| 2 | The platform does not respond to the needs of all its potential users Likelihood: low; impact: medium | WP3 | The Platform will be co-designed and tested in a close collaboration with the various institutional and business partners within the river basin district and following the guidance and standards for climate risk assessment developed in the context of the EU Mission Adaptation to climate change, the EU/EEA European Climate Risk Assessment and the Horizon Europe Climateurope project. We will adopt an agile methodology which will help to monitor interests and accommodate suggestions and recommendations received from the users' organisations. For this end, at the onset of the project we will define Key Performance Criteria (KPI, M3) which will be instrumental to monitor advancement and manage contingency risks, as covered in the WP |
| 3 | Failure to secure high resolution data necessary for application of CRI at spatial scales relevant for the project Likelihood: low; impact: low | WP3 | The partners of this project include numerous local authorities involved in spatial and environmental management and monitoring. This will guarantee access to otherwise restricted data at local or municipal scale, making it possible to develop and apply the CRI as envisaged. In addition, partners to this project participate in many national and international projects and access the data produced thereof. In any case, we will identify alternative data sources as a part of contingency risk management. |
| 4 | Assumptions and choices made while constructing the CRI can be questioned by some partners and organisations, which hamper the adoption of the composite index Likelihood and impact low-medium and manageable | WP3 | The methods underpinning the construction of the index can be afflicted by limitations related to the indicators used or a reduced coherence/consistency among. The aggregation of the indicators require choices which may prove sensitive to future development choices or limit the robustness of the composite index. We will work with accepted guidance documents and perform sensitivity analysis, reducing so the structural or conceptual uncertainties. In any case, the individual indicators will be accessible by the users seeking to build their own composite indices for their specific purposes - hence the design will be kept flexible and adaptable. |
| 5 | The composite indices may not be sufficient to consider or assess dynamic interactions among | WP3 | Methods, models and data will be critically reviewed by all partners and intended users of the composite index. By applying the agile methodology of co-development, and by maintaining |

| Critical risks & risk management strategy | | | |
|--|---|---------------------------|--|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| | hazard, exposure and vulnerability factors, for specific geo-graphic areas of interests or users' purposes. Likelihood: low; impact: low | | the flexibility/adaptability of the indices will minimise this risk. If additional competence or skills will be needed which are not available among the partners contributing to this WP/ task, the team will engage other experts from other project partners' organisations. |
| 6 | Difficulties in identify and engage the most appropriate stakeholders Difficulties in identify and engage the potential recipients of capacity building actions Likelihood: medium; impact: high | WP4 | At proposal stage: direct and indirect (letters of support) engagement of most of the main actors, including 4 Regional Governments and environmental agencies, ADBPO and AIPO and ANBI (National and Regional Associations of Consortia for Land Reclamation, Irrigation and Improvement) At implementation stage: mapping of all relevant stakeholders, a dedicated task force in the MGD and Stakeholders Boards at District and Regional level, Likelihood: low; impact: low |
| 7 | Permanent capacity building programme on soil management in conservation agriculture: difficulties in creating a strong bond with Academia and Institutions dedicated to technical training in agriculture which is necessary for a participated and shared approach Likelihood: medium; impact: medium | WP4 | At proposal stage: direct and indirect engagement of a large number of organisations, including Academia and technical experts At implementation stage: exploitation of the ongoing procedures and network created within the LIFE HELPSOIL project Likelihood: low; impact: medium |
| 8 | WP 5.1 includes fairly intensive use of climate, hydrologic, and hydraulic modeling for critical resource assessment and simulation of the filling and emptying of lakes and upstream hydropower reservoirs. Gaps in matching information with actual utility demands may occur. Likelihood: medium, Impact: medium | WP5 | In order to cope with such issues, a preparatory action is foreseen, including the analysis of existing modelling and data with the design of appropriate synergies between models. It is also planned to monitor the progress of the actions and to evaluate on a case by case basis the mitigation activities to be undertaken. Likelihood: low, Impact: medium |
| 9 | Pilot case studies may not provide clear indications as a result of weather conditions or the need to apply monitoring of downstream reaches of reservoirs. In the absence of significant flooding or with little advance forecast time, it may not be possible to use | WP5 | A measurement supervision by ArpaP and PoliTO will be maintained on a multi-year scale, allowing to take advantage of more significant events. In any case, previous documented experiences will be used to effectively integrate possible gaps. Likelihood: high, Impact: medium |

| Critical risks & risk management strategy | | | |
|--|--|---------------------------|--|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| | the proposed monitoring techniques. Likelihood: medium, Impact: high | | |
| 10 | Due to the long time required for the implementation of riparian vegetation management projects, the development of riparian vegetation itself, as well as the intrinsic variability of river hydrology, direct monitoring of the effectiveness of interventions may not be entirely conclusive. Likelihood: medium, Impact: medium | WP6 | In addition to the field measurements, the validity of the proposed interventions will be verified through backward analysis: in particular, the evolution of river sections in which interventions as similar as possible to those proposed have been carried out in past times will be observed. Likelihood: medium, Impact: medium |
| 11 | The action requires various information and related site-specific data both for the definition and implementation of the evaluation methodology of priority ecosystem services, and for the identification of case studies. The availability and uniformity of information can be a risk for the development of the action. Likelihood: medium, Impact: medium | WP6 | It is necessary, right from the start, to create a network and a close collaboration with the project partners and local authorities who may have access to this information in order to make the flow simpler and easier. Likelihood: medium, Impact: medium |
| 12 | Risks that key personnel disagree concerning strategic choices for the accomplishment of the steps in the development of the Tasks (Likelihood: low; Impact: low) | WP6 | Reduce: key personnel involved in the Project are used working in team since several years and each one is very careful and reliable in his/her work. Avoid: Final decision is in charge of Project's coordinator |
| 13 | Limited interest of users (Likelihood: low; Impact: medium) | WP7 | Avoid: Since the Project beginning, the Consortium will commit to simplify, customize and make effective both terminologies and languages regarding the addressed topic, to guide each user in better and earlier identifying its role and the benefits obtainable from the Project, so that his/her behavior can act as multiplier of benefits for further sectors and levels in addition to those usually prioritized if looking at single user sector and level. Avoid: the Partners have acquired significant expertise in participative processes and users' involvement; thanks to these experiences, it will pave the way timely to maximize the awareness about the Activities benefits. (the risk will be minimized with the support of WP4) |

| Critical risks & risk management strategy | | | |
|--|--|---------------------------|--|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| 14 | The occurrence of drought/water scarcity force decision makers to undertake actions disregarding ClimaxPo not yet ready outcomes. Likelihood: medium Impact: high | WP8 | Project partners holds great experience and are managing extensive networks. Existing case study/pilots will be preferred and the conceptualisation of the solution portfolio speed up. |
| 15 | The pilot case studies may not provide clear indications as a consequence of climatic conditions or the need for management of the network that do not allow to highlight the benefit and evaluate the adaptive potential of the task Likelihood: medium Impact: medium | WP8 | The multi-year analysis minimizes the risk and introduces the necessary variability to demonstrate its effectiveness. In addition, previous experiences that have already been documented will be used which can effectively integrate any gaps. |
| 16 | The application of methodologies based on different criteria for assessing the water needs of crops has an intrinsic level of error and difficulty in harmonizing the input flows and the interpretation of the outputs. The outcomes may not fully represent the reality or adequately catch the variability at different scales. Likelihood: medium Impact: medium | WP8 | The goal is not to address irrigation management at field scale but to accurately evaluate small-scale territorial aggregates for water consumption in agriculture. On the scale considered, the errors are minor and the possibility of interoperability greater; therefore, the risk of obtaining non-interpretable or non to be able to validate outputs is minimal. In any case, models already widely used in the area will be used as a "base line". |
| 17 | Occurrence of particularly rainy springs / summers or very dry winters, may avoid to apply the smart storage techniques proposed Likelihood: medium Impact: medium | WP8 | The task will be analysed over several years to reduce the risk. The measurement of the subsurface aquifers could be disturbed by strong capillary rising flows or by lack of sensibility due to an excessive depth. The measurement throughout the season and over several depths will allow us to verify the impacts of the proposed technique. |
| 18 | The greatest difficulty could be related to the actual possibility/ability to involve farmers in the application of practices and therefore in the adoption of NDP measures. Likelihood: low Impact: high | WP8 | The probability of success of the mitigation measure is high and so is the impact. Maintain and develop demonstration/training activities in close connection with the implementation of the agro-climatic-environmental measures of the NSP as implemented by the regions of the Po Valley area. |
| 19 | The foreseeable risk is represented by the activation and management of the stakeholder engagement in decision-making processes going over the "state of things" and / or the needs of short term, but | WP8 | The activities will include the dynamic implementation of the database and knowledge on land use transformations for the assessment of the impact on the state of "land degradation" years after the impact of the interventions on the territory. The engagement and active involvement of local actors will be crucial. Particular attention and resources will therefore |

| Critical risks & risk management strategy | | | |
|--|---|---------------------------|--|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| | considering also of the foreseeable medium-long term effects due to climate change. Likelihood: low Impact: medium | | be dedicated to this aspect in the Action. A meeting halfway through the duration of the Action with the Stakeholders' Table will be expressly dedicated to verifying any need for integration of the planned activities and / 13or strengthening the methods of involvement and participation of local actors. |
| 20 | Limited access to the update of the NAS and NAP Likelihood: low; impact: high | WP11 | At proposal stage: there is no clear timeline for the update of the NAS, while the NAP has not been approved yet. Therefore not much could be done before the submission of the proposal At implementation stage: CMCC is the technical organisation that supported the Ministry in drafting the NAS and NAP and is now a member of the consortium. Also, ADBPO is the authority in charge for the implementation of the NAS at river basin level. Therefore there are direct contacts in order to contribute. The only uncertainty is about the timing, which will be decided by the Ministry for Ecologic Transition |
| 21 | Lack of interest for exploitation of project results at district level Likelihood: low; impact: high | WP11 | At proposal stage: the consortium has been formed with partners have an extensive network of stakeholders at national, district, regional and local level, which should allow to reach a large number of potentially interested parties. Also, some of the project partners have decisional power on local and regional policies which should also facilitate the uptake of new solutions, methodologies and guidelines At implementation stage: the MGD task forces and the Stakeholder Boards should allow a significant outreach. WP2 to WP8 will produce accessible results, guidelines and recommendations. WP10 will reinforce dissemination and networking. WP11 will produce guidelines to support the development of results that are understandable by potential users and have an intrinsic potential for sustainability and exploitation |
| 22 | Lack of interest for peer-to-peer replication exchange and visits Likelihood: low; impact: high | WP11 | At proposal stage: the consortium has contacted potentially interested river basins and has collected letters of support from 2 Portuguese and 1 Hungarian River Basin Managing Authority At implementation stage: the consortium will shortlist a number of interesting Italian and European river basins based on similar needs and opportunities since the very beginning of the project. Also, ADBPO will participate in thematic national and EU working groups where river basin authorities already meet and exchange information and experiences |

| Critical risks & risk management strategy | | | |
|--|--|---------------------------|--|
| <i>Grant Preparation (Critical Risks screen) — Enter the info.</i> | | | |
| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
| 23 | Ensuring that the staff recruited/trained during the project will continue to work on the implementation of the NAS at District level (WP2 – WP10) | WP11 | For point 7 risk is that the staff (WP2 – WP10) recruited/trained during the project does not continue to work on the implementation of the NAS, the mitigation measures proposed are that the partners will be encouraged to recruit new staff on a long term basis and to create positions for trained staff that are specifically dedicated to adaptation planning, funding and management and to the long-term implementation of the NAS |



Programme for the Environment and Climate Action (LIFE)

Application Form

Administrative Forms (Part A)
Technical Description (Part B)

(LIFE SIP and SNAP/)

IMPORTANT NOTICE

What is the Application Form?

The Application Form is the template for EU grants applications; it must be submitted via the EU Funding & Tenders Portal before the call deadline.

The Form consists of 2 parts:

- Part A contains structured administrative information
- Part B is a narrative technical description of the project.

Part A is generated by the IT system. It is based on the information which you enter into the Portal Submission System screens.

Part B needs to be uploaded as PDF (+ annexes) in the Submission System. The templates to use are available there.


How to prepare and submit it?

The Application Form must be prepared by the consortium and submitted by a representative. Once submitted, you will receive a confirmation.

Character and page limits:

- page limit normally stage 1 - concept note **45** / stage 2 - full proposal **200** pages (unless otherwise provided in the Call document)
- supporting documents can be provided as an annex and do not count towards the page limit
- minimum font size — Arial 9 points
- page size: A4
- margins (top, bottom, left and right): at least 15 mm (not including headers & footers).

Please abide by the formatting rules. They are NOT a target! Keep your text as concise as possible. Do not use hyperlinks to show information that is an essential part of your application.

 If you attempt to upload an application that exceeds the specified limit, you will receive an automatic warning asking you to shorten and re-upload your application. For applications that are not shortened, the excess pages will be made invisible and thus disregarded by the evaluators.

 **Please do NOT delete any instructions in the document. The overall page limit has been raised to ensure equal treatment of all applicants. Removing the instructions may result in your proposal being considered inadmissible.**

ADMINISTRATIVE FORMS (PART A)

Part A of the Application Form must be filled out directly in the Portal Submission System screens.

TECHNICAL DESCRIPTION (PART B)**COVER PAGE**

Part B of the Application Form must be downloaded from the Portal Submission System, completed and then assembled and re-uploaded as PDF in the system.

Note: Please read carefully the conditions set out in the Call document (for open calls: published on the Portal). Pay particular attention to the award criteria; they explain how the application will be evaluated.

| PROJECT | |
|-----------------------------|---|
| Project name: | CLIMate Adaptation for the PO river basin district |
| Project acronym: | LIFE CLIMAX PO |
| Coordinator contact: | Dott. Alessandro Bratti Autorità di Bacino Distrettuale del Fiume Po, Po River Basin District Authority (ADBPO) |

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1. RELEVANCE

Fill in **only** sections 1.1-1.3 at stage 1. Fill in **all sections** at stage 2.

1.1 Background and general project objectives

Background and general project objectives

Explain the problem and the needs to be addressed in the project.

Provide following information about your project:

- *Targeted plan/strategy/action plan including (expected) date of adoption, period covered, status of implementation (main bottlenecks/gaps). Please note that it should be one of the plans/strategies/action plans listed as eligible in the Call document.*
- *Geographical scope of the project (does the project cover entire country, one or several regions, cities etc?)*

Describe the background, starting point/quantified baseline of the project, explaining the current level of implementation of the targeted plan/strategy/action plan.

Explain the main gaps and barriers for the full implementation of the plan/strategy/action plan and main needs in terms of investments, concrete measures, capacity building etc.

State the overall aim and explain where the main activities of the project will take place. Explain the reasons behind your choice.

Climate change is leading to great environmental challenges, which require compelling and urgent actions. Southern Europe and the Mediterranean have been recognized as one of the most vulnerable and responsive regions to global warming with several interconnected sectors threatened and under risk from human-induced climate change. Due to its peninsular conformation and complex orography, linked to a rich but unequal economic development and uncontrolled urbanisation, Italy is one of the most climate hazard-prone and vulnerable countries in Europe.

Many of the expected impacts of climate change on environmental resources and society are triggered by the altered water cycle and precipitation regimes (intensity, quantity and distribution), and amplified by population growth, increasing water demand, energy and food security, and unsustainable urban development. To support effective and targeted adaptation measures and secure economic, social and environmental objectives, planning should make use of results based on solid scientific research that takes into consideration multiple interests related to the management of water resources. It is appropriate to involve all the interested parties and coordinate an integrated management of water resources in the planning processes, which optimizes the use of multiple water resources to mitigate conflicts between various sectors and achieve a sustainable development and recognizes links between water quantity and water quality in restoring natural systems.

Adaptation to climate change and building state and societal resilience to climate variability is a shared, progressively more coordinated, and goal-oriented concern of European and national policies. The EU Strategy on Adaptation to Climate Change has fostered the development of National Adaptation Strategies (NAS) and National Adaptation Plans (NAP) and boosted knowledge sharing and mainstreaming of climate adaptation in other policy areas. **Italian NAS, adopted in 2014**, analysed the most relevant climate change impacts on 12 socio-economic and natural sectors and suggested a set of adaptation lines of actions to cope with such impacts (MATTM, 2014). Throughout 2016 and 2017, with a last version dated June 2018, the **National Adaptation Plan (NAP) was elaborated as a follow-up but not formally adopted by the Government yet.**

On top of that, the **National Recovery and Resilience Plan (NRRP)** formalised in 2021 dedicates 15,06 billion euros to Land and Water Resources Protection (Italian NRRP, Mission 2, Component 4, including forecast and monitoring measures, flood management measures, resilience actions, measures against hydrogeological risk, actions for the protection of air quality, biodiversity, habitats, etc.). Among all the actions included in the NRRP, WWF Italy has recognised the Po Valley as one of the 6 national large areas (area vasta) that are of maximum priority for ecological connectivity and adaptation to climate change. Therefore, the **NRRP has adopted a specific set of measures (among which, Mission 2, Component 4, investment 3.3) dedicated to ecology restoration to be implemented in the Po Valley** with a significant impact on renaturation and management of the riverbeds.

The Italian Government has launched a working group (in which the consortium partner CMCC, the Euro-Mediterranean Centre on Climate Change, has been called upon) to start working on the planning of the NAP implementation.

Nevertheless, at this stage, the only approved National document in place is the **National Adaptation Strategy** providing a number of sectors and broad proposed areas of intervention divided in soft, green

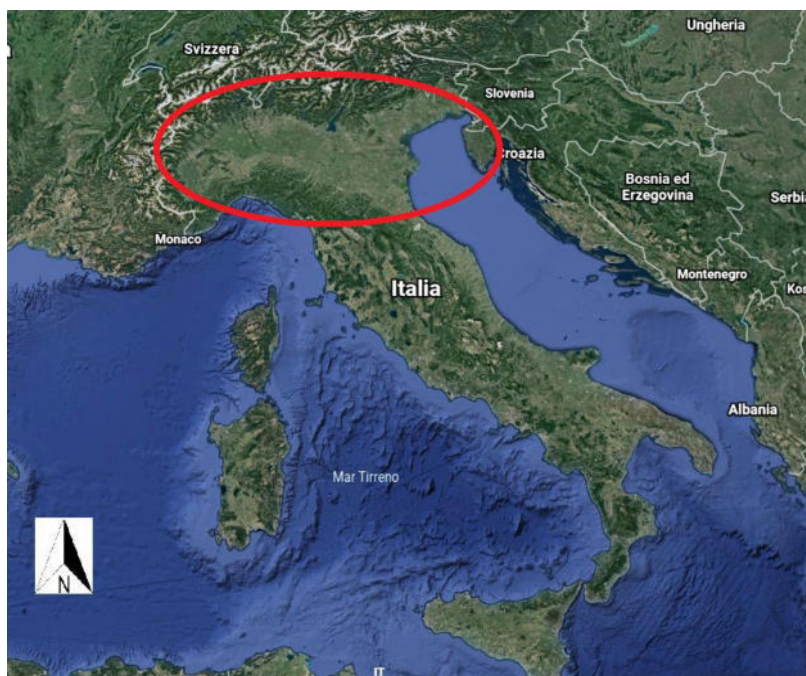
and grey action proposals (see attached IT NAS 2014 – “NAS - Strategia Nazionale di Adattamento ai Cambiamenti Climatici” – page 113-197, attachment 3 “Proposte d’azione – action proposals”).

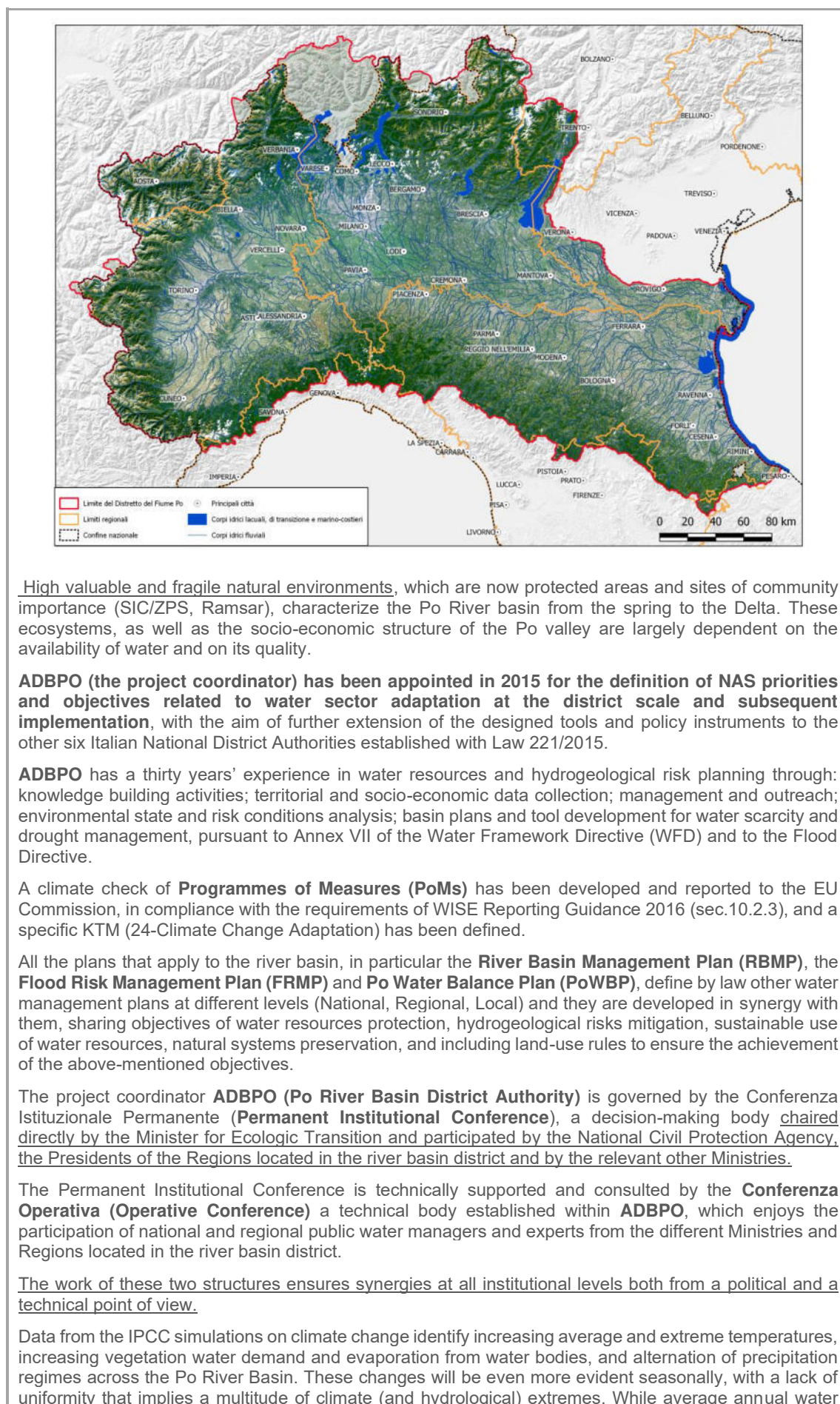
Being the NAS so broad at national level and without specific actions, indicators and roles to implement it, there is no official monitoring of the state of implementation.

A lot has been done but not in a coordinated and consistent way. There is clearly a need to remove obstacles, promote capacity building and engage stakeholders in bottom-up measures (at local, regional and river basin level) to support the implementation of the action proposals in the designated areas of intervention.

Fortunately, the NAS recognises the stewardship role of **the Po River Basin District (PRBD)** as a **national special case and pilot area** for climate adaptation in the water management sector (see attached IT NAS 2014 – “NAS - Strategia Nazionale di Adattamento ai Cambiamenti Climatici” – page 54, chapter 3.15.2. “Distretto idrografico padano” and page 57, par. 4.1 “Settori e micro-settori d’azione identificati in Italia”).

This is due both to the availability of fresh water and the strategic nature of water-use in the district, within which the 40% of the gross domestic product (GDP) is produced, with significant impacts on environment, water quality and water quantity. The basin of the longest Italian river, the Po River, one of the most important river ecosystems in the peninsula, along with other minor rivers basin, falls within the competence of the **Po River Basin District Authority (ADBPO, the project coordinator)**. The Regions of Piedmont, Aosta Valley, Liguria, Lombardy, Veneto, Emilia-Romagna, Tuscany, Marche, the Autonomous Province of Trento lie partially or completely within it (see images below).





High valuable and fragile natural environments, which are now protected areas and sites of community importance (SIC/ZPS, Ramsar), characterize the Po River basin from the spring to the Delta. These ecosystems, as well as the socio-economic structure of the Po valley are largely dependent on the availability of water and on its quality.

ADBPO (the project coordinator) has been appointed in 2015 for the definition of NAS priorities and objectives related to water sector adaptation at the district scale and subsequent implementation, with the aim of further extension of the designed tools and policy instruments to the other six Italian National District Authorities established with Law 221/2015.

ADBPO has a thirty years' experience in water resources and hydrogeological risk planning through: knowledge building activities; territorial and socio-economic data collection; management and outreach; environmental state and risk conditions analysis; basin plans and tool development for water scarcity and drought management, pursuant to Annex VII of the Water Framework Directive (WFD) and to the Flood Directive.

A climate check of **Programmes of Measures (PoMs)** has been developed and reported to the EU Commission, in compliance with the requirements of WISE Reporting Guidance 2016 (sec.10.2.3), and a specific KTM (24-Climate Change Adaptation) has been defined.

All the plans that apply to the river basin, in particular the **River Basin Management Plan (RBMP)**, the **Flood Risk Management Plan (FRMP)** and **Po Water Balance Plan (PoWBP)**, define by law other water management plans at different levels (National, Regional, Local) and they are developed in synergy with them, sharing objectives of water resources protection, hydrogeological risks mitigation, sustainable use of water resources, natural systems preservation, and including land-use rules to ensure the achievement of the above-mentioned objectives.

The project coordinator **ADBPO (Po River Basin District Authority)** is governed by the Conferenza Istituzionale Permanente (**Permanent Institutional Conference**), a decision-making body chaired directly by the Minister for Ecologic Transition and participated by the National Civil Protection Agency, the Presidents of the Regions located in the river basin district and by the relevant other Ministries.

The Permanent Institutional Conference is technically supported and consulted by the **Conferenza Operativa (Operative Conference)** a technical body established within **ADBPO**, which enjoys the participation of national and regional public water managers and experts from the different Ministries and Regions located in the river basin district.

The work of these two structures ensures synergies at all institutional levels both from a political and a technical point of view.

Data from the IPCC simulations on climate change identify increasing average and extreme temperatures, increasing vegetation water demand and evaporation from water bodies, and alternation of precipitation regimes across the Po River Basin. These changes will be even more evident seasonally, with a lack of uniformity that implies a multitude of climate (and hydrological) extremes. While average annual water

availability may decrease or remain stable, during most of the irrigation season (May-Aug) the runoff may decline up to 40% in large parts of the district. A heterogeneous orography characterizes the district: the Alpine region (to the north), the floodplain (in the middle), the Apennines region (to the south) and coastal region (to the east). These are differently impacted by climate changes, depending both on local hydrologic and climatic features, local vulnerability, related to land use and infrastructures, socio-economic structure, and capacity of adaptation, which also vary significantly between marginal mountainous areas at risk of abandonment, production areas, urban and coastal areas.

Also, the Po River Basin covers a large geographical area divided into 9 Italian Administrative Regions (see above) which implies a very complex organisation and management. For this reason, the Po River Basin is object of many different plans, regulations, initiatives, projects, measures, interventions and funding that are not always fully streamlined.

The consortium has identified a series of barriers limiting the implementation of the NAS in the Po River basin district:

- (i) Lack of effective coordination mechanism ensuring that adaptation efforts (and related funding) are coherent and complementary at multiple levels of governance (**governance gap**);
- (ii) Lack of shared, consolidated and quality-assured climate information and knowledge that is necessary to develop user-tailored climate-services and concrete adaption strategies (**knowledge gaps**);
- (iii) Lack of capacity to analyse climate related hazards, vulnerabilities and risks; identify and evaluate the site-specific suitability of adaptation measures and policies; and implement, review and monitor their performance and success (**capacity gaps**).

LIFE IP CLIMAX PO seeks to foster the implementation of the Italian NAS in the Po River Basin District (PRBD). The consortium has identified the key catalysing needs and has selected the most pressing measures for adaptation in the sectors of water use and management with the aim to integrate and support the use of complimentary funding to implement further adaptation actions within the NAS.

The project builds on the EU Climate Adaptation Strategy and the 2018 evaluation report of the Strategy, many EU funded projects previously performed by beneficiaries and stakeholders, regional and local adaptation strategies and plans, and local and sectoral assessment.

The overall and specific objectives of the project respond to the gaps identified in the Italian NAS/NAP, and offer the greatest value-added to other water, soil and biodiversity planning instruments at river basin district scale or lower.

Therefore, the overall objective of the project is to ***boost adaptation to climate change through climate-smart water resources management at the river basin district scale by implementing NAS measures tailored-made on the local characteristics and climatic peculiarities present in the district***, in total compliance with (constantly revised and updated) River Basin Management Plans and Flood Risk Management Plans objectives for water bodies in the district.

In fact, the ongoing implementation of the River Basin Management Plan - RBMP (PdGPO, Piano di Gestione delle Acque - under the WFD) and of the Flood Risk Management Plan (FRMP), even though they are not explicitly aimed at climate adaptation in the basin have created a basis of governance and involvement of responsible regional authorities for CLIMAX PO to build upon.

In particular, during the implementation of the RBMP 2015-2020 and the planning of the RBMP 2021-2027 (recently approved, in December 2021), the cooperation between the Regional Authorities, the Autonomous Province of Trento (the legally competent authorities for implementing the national law on water management) and the Regional Environmental Agencies (ARPAs) have been actively involved and engaged their relevant stakeholders.

For topics related to economic development, the Ministry for Ecologic Transition has coordinated a set of support actions to ensure the national and regional cooperation, and the synergies and complementarity between the local and regional authorities.

Based on the indications of the RBMP, ADBPO has engaged and involved all the regulatory administrations at district level, such as the regional authorities and CREA (Agency of the Ministry for Agriculture, Agrofood and Forests), ARERA (Regulatory Authority for energy and the environment, including water – overseeing the water market and supporting consumers), ISTAT (Italian National Institute of Statistics) for the verification and availability of the necessary data required and to facilitate the exchange of information necessary for economic and financial planning and for the implementation of measures.

Also, synergies have been found in the planning and implementation of the RBMP and the FRMP at district level, with specific win-win measures in the following key type of measures that are presently being implemented:

KTM5 - Improvement of longitudinal continuity;

KTM6 - Improvement of hydromorphological conditions of water bodies, other than longitudinal continuity;
 KTM14 - Research and improvement of the state of knowledge in order to reduce uncertainty;
 KTM17 - Measures to reduce sediment that originates from erosion and surface runoff from soils;
 KTM21 - Measures to prevent or control pollution from urban areas and road and transport infrastructures;
 KTM23: Measures for natural water retention.

CLIMAX PO and its consortium made of ADBPO and the three Regional Administrations (Piemonte, Lombardia and Emilia-Romagna) covering 90+% of the basin district, plus letters of support from 4 more regions (Valle d'Aosta, Provincia Autonoma di Trento, Toscana, Liguria) kicks off from here and aims at adding a strategic and integrated approach to climate adaptation and resilience, reinforcing governance and integration of funding (WP2), supporting stakeholders engagement and building their capacity (WP4 and WP10), providing the technical tools and approach (WP3), developing pilot actions and exploiting them through guidelines and policy recommendations (WP5, 6, 7, 8), and feeding adaptation measures into an institutionalisation process aimed at the integration of adaptation into the regular workflow of the district, decision-making authorities and, coherently, in the planning cycles of the present and future RBMP and FRMP and other plans, including the NAS and NAP (WP11).

1.2 Specific project objectives

Specific project objectives

Describe the specific objectives (clear, measurable, realistic and achievable within the duration of the project).

Note: Bear in mind that the overall aim of SIP/SNAP project must be to contribute to the full implementation of the targeted plan/strategy/action plan.

The specific objectives (SO) of the project are:

SO1. Governance of climate adaptation at Po River Basin District level. Improving the climate risk and adaptation governance in water resource management and ensuring policy, funding and technical coordination and coherence, by means of:

- Coordinated planning processes and instruments across vertical and horizontal governance levels;
- Coordinated and integrated management of funds dedicated to soft and hard adaptation measures in the project area;
- Monitoring, reporting and evaluation methods and practices for climate adaptation and coordination of funding
- Reforms of water allocation, ecological flow, and reservoir management regimes and practices;
- Innovative governance mechanism building upon existing multi-stakeholder partnerships;
- Mainstreaming of nature/ecosystem-based adaptation into sectoral policies;
- Contribution to revision and update of national and regional rules, regulations, strategies and plans.

SO2. Shared climate knowledge production. Improving the understanding of climate risk within the district, and creating a platform for harmonised, quality assured knowledge and services, through:

- Better understanding of climate variability and change related hazards, vulnerabilities and risks;
- Exploitation of modern Earth Observation, System Model and open public-sector information;
- Assessing the value of and harnessing ecosystem services and biodiversity for adaptation.

SO3. Building capacity and awareness. Accelerating climate adaptation through education, training and public awareness, by:

- Filling the gaps in professional training, education and capacity building;
- Capacity building for policy makers and technical experts of public administrations and civil society organisations;
- Building up public awareness and perception of climate risk, hence the culture of risk coping.

SO4. Improving water security and climate resilience. Building up the resilience to climate change and variability and improving water security, by means of:

- Enhancing water retention and storage capacity management, serving multiple purposes;
- Promoting nature/ecosystem-based solutions and restoration of connectivity of green and blue infrastructures;
- Promoting water saving and reuse, and conservative soil and farming management practices;
- Retrofitting or otherwise amending and extending critical water infrastructure;
- Demonstrating the performance of ecosystem-based approaches in comparison to conventional “grey” measures.

SO5. Institutionalisation of climate adaptation at Po River Basin District level. Making climate adaptation a permanent part of the River Basin District governance, by means of:

- A consolidated and permanent multi-level governance platform with dedicated, thematic task forces;
- A consolidated and permanent system of Stakeholder Boards and Capacity Building;
- Dedicated technical tools (i.e., the adaptation observatory and the adaptation platform)
- Cross-sectoral working groups mainstreaming climate adaptation in different sectors and highlighting dedicated funding streams;
- Technical guidelines and policy recommendations to mainstream climate adaptation in the revision and update of plans, strategies and policies;
- Participation in National and International working groups;
- Exchanging visits and good and bad practices with other National and International River Basin District Authorities.

1.3 Concept and methodology

Concept and methodology

Describe the overall intervention logic of the project, including the main idea and assumptions (i.e. how are the proposed activities and steps of your project expected to lead to the intended changes in terms of outcomes and impacts).

*You should divide your project into **phases**, each one lasting if possible at least 3 years (not compulsory, but strongly recommended to reduce administrative burden). The first phase should be clearly described, the remaining phases of your project may include fewer details but overall you should be able to demonstrate how the project objective will be achieved once all the phases are implemented. You will be able to make necessary adjustments to the subsequent phases as you proceed with the implementation of the project.*

Explain the methodology, i.e. the main tools, techniques, methods and procedures you will use to implement the technical part of your project. Justify why the proposed methodology is the most suitable for achieving the project's objectives.

The Po River Basin District (PRBD) has been extensively studied through ordinary planning, river basin water management and flood risk management plans, EU and nationally/regionally funded project studies, and several other. The basin has then been divided into four homogeneous areas, based on analyses of climate change related hazards and vulnerabilities; similar **macro-areas** have been also identified by the NAS with similar challenges and opportunities for transformative changes to deal with climate risks:

Alpine and Apennine macro-area is susceptible to higher average temperature increases, accelerated melting of glaciers; reduced snowpack; amplified soil erosion, floods, landslides, and glacier lakes outbursts. Reduced natural water retention and capacity to fill the upstream reservoirs and regulated alpine lakes (Maggiore, Garda, Como, Iseo and Idro) will negatively affect flow regulation and hence drought mitigation capacity across the district.

Lowlands macro-area formed by former floodplains will be affected by extreme summer temperatures and extended dry spells accelerating soil degradation and affecting rain-feed agriculture and valuable aquatic ecosystems. Expected increase of the intensity and frequency of autumn and spring river flows will further increase already high flood risk, resulting also from uncontrolled urbanisation and development. Drinking water supply will be prone to service disruption.

Coastal macro-area along the Upper Adriatic Sea, hosting important natural and cultural heritage and infrastructure assets, is situated to a large extent below the sea level and its development was only made possible thanks to extensive artificial drainage systems that need retrofitting. Sea level rise and extreme sea levels will amplify coastal flood risk and land/soil salinization. The UNESCO Bio-sphere reserve and other wetlands are prone to degradation and/or permanent loss.

Metropolitan and diffuse urban centres macro-area, host a population of more than 10 million people and will be exposed to greater flooding risk amplified by intense convective precipitations.

Nevertheless, as introduced in chapter 1.1, the NAS is very broad in terms of geographical coverage and very "light" in terms of targets, indicators and deadlines as this part should become the aim of the NAP.

The Italian NAS includes 600+ action proposals divided in soft; green and grey.

There are 30+ actions proposals directly dedicated to the Po River basin district. They all belong to soft action proposals, while in the green and grey section action proposal are referred to general areas of intervention, not specific for the district.

For this reason, we have selected the broad actions proposed by the NAS that are, in principle, applicable to the Po River Basin District. There are 241 action proposals that are coherent with the water security and climate resilience approach of the project and we have considered them as the part of the NAS targeted by CLIMAX PO (see attached "Implementation overview" xls file)

This means that there is a very significant number of action proposals that are applicable to the district but there is no indication of roles and responsibilities, targets, and deadlines, beside a general "short term (before 2020)" and "long term (beyond 2020)".

For this reason, there is a need for monitoring and coordinated governance of the **NAS** at district level and clear integration with existing plans, such as the **Po River Basin Management Plan**, the **Flood Risk Management Plan** and **Water Balance Plan**.

Moreover, even when the NAP will be adopted and become official, it will give roles and targets to administrations and public and private organisations at both regional and local level that might not be ready to take up the challenge and be able not only to implement the different actions but also to coordinate with each other within the large area of the Po River basin district.

Therefore, the whole intervention logic starts from clear **needs for barrier removal** in the following areas of intervention:

- Better and Coordinated Governance and Planning
- Capacity building
- Stakeholder Engagement
- Common tools and methodologies
- Good practice examples adapted on specific areas of the district
- Metropolitan and diffuse urban centres
- Monitoring and Evaluation,
- Replication of good practices
- Institutionalisation and policy recommendations and update

Better and Coordinated Governance and Planning (linked to WP2) focuses on the mapping and review of planning and legislative tools and on the creation of a Multilevel Governance Deal (MGD) including the National, District, Regional and Local level with dedicated task forces for coordinated management of the district, policy coordination, coordination of funding, technical implementation, monitoring and policy revision.

Capacity building (linked to WP4) focuses on fostering the technical, financial and policy making skills of the consortium members and then of the relevant players and stakeholders at National, Regional and Local level offering training opportunities for both public (i.e., Managing Authorities of funds) as well as private (i.e., Farmers implementing nature-based solution actions)

Stakeholder engagement (linked to WP4) is a transversal action focusing on creating the knowledge basis for governance and technical activities and maintaining the participation of public and private stakeholders during the implementation of the action. In fact, a lot of key stakeholders are already members of the consortium (i.e., the National Authorities managing the District and the Regional administrations and their technical bodies) but many of them are spread throughout the district area and at national level.

Common tools and methodologies (linked to WP3) focus on creating the shared knowledge basis and making it available through a platform (foreseen by the NAS) based on real and simulated data, scenarios and climate services that can be replicated within the District and beyond.

The collection and systematization of data and information of interest for the management of water resources and consequent impacts guarantees a point of reference in the consultation of water data: the data are aligned with existing European and National systems, such as the Water Information System for Europe (WISE), Copernicus Climate Change Service C3S, the National Information System National of

Water Resources Management in Agriculture (SIGRIAN). In the implementation phase, the consortium will count on experiences and results produced by various national and international initiatives, such as localization (downscaling) with high resolution (up to 2 km) of the information provided by the ERA5 analysis models (ECMWF) which currently represent the state of the art (i.e., CEF TELECOM HIGHLANDER) or spatialization of the series relating to atmospheric variables (i.e., CEF TELECOM MISTRAL). Copernicus Climate Change Service, C3S will also play a fundamental role as “data provider”. These data will be integrated with data from projection to 2100 within different concentration scenarios provided as direct outputs by EURO-CORDEX climate models.

The consortium will also refine the climate risk assessment methodology developed by CMCC within the frame of the Italian NAP and implement it for the purposes of the Po River basin district adaptation process, creating a climate risk index (CRI).

It will use the recently developed Climate Risk Index (CRI, Mysiak et al., 2018) to support an initial identification and classification of areas (regions and provinces) with a higher tendency to be adversely affected by extreme weather events. The CRI has been developed by CMCC in the context of the Italian National Climate Change Adaptation Plan (NAP). The index will work alongside a multi-risk assessment framework (MRF) aimed at supporting a more detailed analysis of potential impacts at district level. The results will be analyzed through cost-benefit and cost-effectiveness analyzes, as well as with water-food-energy nexus tools, and EU DRMKC.

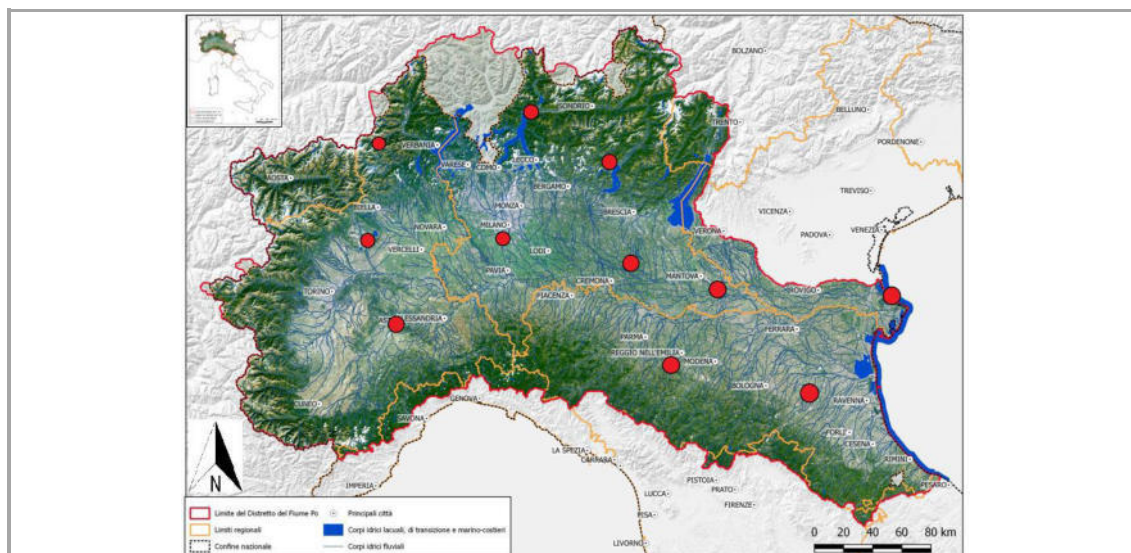
Good practice examples adapted on specific areas of the district (linked to WP5 to 8) focuses on the 4 identified macro-areas of intervention where the consortium has already identified specific **focal areas** as targets for pilot implementation of specific high priority adaptation actions.

Focal (geographic or thematic) areas are examples of places across the whole district prone to specific climatic risks and adaptation challenges:

- Droughts and floods and their influence on the performance of the stored volumes in alpine lakes with ensuing impacts on the of downstream (farmers) and upstream (hydroelectric facilities) users, and on ecological flows (WP5);
- Increased extreme convective precipitation events and ensuing floods and other hazards (in Metropolitan and diffuse urban centres as well as coastal areas) – WP7;
- Droughts and declining water availability (scarcity) and ensuing land degradation – WP8;
- Variations in the flow rate and their impact on riparian areas, causing removal of vegetation during extreme events, reduced availability of water in dry periods – WP5;
- Increase in temperatures, creating favourable conditions for invasive species – WP5;
- Economic damage and losses for productive sectors and infrastructure – WP5-6-7-8;
- Deterioration of environmental and natural quality and loss of biodiversity – WP6-8.

The pilot actions have been designed following *user tailored approach consistent with the methodological frameworks of NAS/NAP, river basin district plans, and local intervention priorities*. The relevant governance bodies and stakeholders are closely involved.

The pilot actions within the focus areas are aimed at becoming good practices replicable in other similar contexts within the district and beyond and they will take place in the areas indicated in the map below.



In the implementation of pilot actions, the partners will use specific environmental, hydrological and statistical modelling softwares, such as FEWS, SIMETAW, MesoHABSIM, as well as webGIS georeferencing data.

In one pilot action (task 6.2) the partners will test the Safer_RAIN tool developed in the Climate-KIC Demonstrator "SAFERPLACES" project (<https://saferplaces.co/>) and based on fast-processing DEM for risk assessment of rain floods in large urban areas. The partners will also use a methodology employed in the RAINBO project which has been experimented in target areas of Emilia-Romagna with the use of CML sensors for precipitation estimation.

Metropolitan and diffuse urban centres (also linked to WP4 and WP10)

Water and non-water related risks and adaptation measures in Metropolitan and diffuse urban areas are also considered in WP4 and WP10 where capacity building, gap analysis to profile adaptation in existing urban plans and general awareness raising actions have been planned to assist Local Governments and their communities (also within the Covenant of Mayors for Climate and Energy).

Monitoring and Evaluation (WP9 with support of WP2) focuses on collecting data and analysing the impact of the project in terms of technical achievements and complementary funding mobilized.

The integrated analysis of the benefits will also include the use of the new infrastructure realized through the BEST system (Benefits Estimation Tool - valuing the benefits of blue-green infrastructure) for the assessment of ecosystem services, developed in England by the Environment Agency in partnership with the Association of the Construction Industry for Research and Information (CIRIA). This system allows to evaluate and monetize the ecosystem services provided by green and blue infrastructure.

The monitoring, communication, and evaluation scheme (MRE) adopted will track the progress made, evaluate what has been achieved and communicate the adaptation processes and results. The overall goal, however, is to allow "new information and lessons learned to shape future decisions" (SEE, 2015) within a policy cycle of iterative adaptation.

Replication of good practices (WP11) focuses on transforming project pilot actions and other actions implemented in the district into case studies to be made available and promoted for funding in other areas of the District and beyond through a peer-to-peer exchange approach.

Institutionalisation, policy recommendations and updates of existing plans and strategies (WP2, WP9 and WP11) start from the monitoring and evaluation of project activities in terms of achievements but also in terms of barriers and opportunities and focuses on the development of guidelines and recommendations to improve National, District, regional and local policies, regulations, plans having an impact on climate adaptation in the district and beyond. It also includes the integration of adaptation measures in the regular update of plans (i.e., RBMP and FRMP) and the contributions to the expected updates of the NAS.

The project is divided in 3 phases lasting 3 years each.

Phase 1 is mainly focused on barrier removal:

- Better and Coordinated Governance and Planning (WP2)
- Capacity building (WP4)

- Stakeholder Engagement (WP4)
- Common tools and methodologies (WP3)
- Initial development of good practice examples (WP5 to 8)
- Initial coordination of funding for NAS implementation (WP2)
- Monitoring and Evaluation (WP9)

Phase 2 will be mainly focused on pilot actions and NAS implementation:

- Good practice examples adapted on specific areas of the district (WP5 to 8)
- Coordination of funding for NAS implementation (WP2)
- Monitoring and Evaluation (WP9)
- Initial replication of good practices (WP10)
- Continuous capacity building and stakeholder engagement, whenever necessary (WP4)
- Initial institutionalisation and policy recommendations and update (WP2)

Phase 3 will be mainly focused on replication and institutionalisation:

- Finalisation of good practice examples adapted on specific areas of the district (WP5 to 8)
- Coordination of funding for NAS implementation (WP2)
- Monitoring and Evaluation (WP9)
- Replication of good practices (WP10)
- Continuous capacity building and stakeholder engagement, whenever necessary (WP4)
- Institutionalisation and policy recommendations and update (WP2)

These areas of intervention and their respective work packages are intertwined in terms of exchange of information and participation of the consortium members and horizontal activities (governance, capacity building, stakeholder engagement, communication, dissemination, etc.) will continue throughout the project implementation.

These areas of intervention are all reflected in the work plan and in the work packages drafted in chapter 3.

1.4 Compliance with LIFE programme objectives and project topics *(n/a for stage 1)*

Compliance with LIFE Programme objectives and project topics *(n/a for stage 1)*

Explain how the project contributes to the specific objectives of the LIFE Programme and the sub-programme targeted by the call (Nature and Biodiversity, Circular Economy and Quality of Life, Climate Mitigation or Clean Energy Transition).

Explain how the proposed project addresses the scope of the topic description in the Call document.

CLIMAX PO is a Strategic Integrated Project under the LIFE Climate Action sub-programme

How CLIMAX PO contributes to the specific objectives of the LIFE Programme:

The LIFE Programme is the EU Programme for Environment and Climate Action.

As such, it is one of the key contributors to the European Green Deal which aims to:

- transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use
- protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment and climate related risks and impacts.

CLIMAX PO brings together most national and regional and some of the local authorities playing a role in implementing the national strategy on adaptation in the Po River Basin, an area of 74.000 km², with 3.200 local authorities, 16 million inhabitant and generating 40% of the Italian GDP, 37% of Italian industry and 35% of Italian agricultural production.

It involves private and public stakeholders in capacity building and technical training for investments and improved management of water resources, with a specific focus in the agricultural sector: public authorities in adaptation planning; communities and schools in awareness raising campaign.

CLIMAX PO creates a technical and cultural framework for facilitating the investment of hundreds of millions of euros in the efficient use of water resources, in the implementation of nature and eco-system based solutions, in renaturation actions, in flood risk management, in the preservation of water and soil for agricultural purposes, in adaptation planning in metropolitan and urban diffuse centres.

How CLIMAX PO contributes to the specific objectives of the LIFE sub-Programme Climate Change Mitigation and Adaptation:

To develop, demonstrate and promote innovative techniques, methods and approaches for reaching the objectives of the EU legislation and policy on climate action and to contribute to the knowledge base and to the application of best practice

In the overall context of the implementation of the National Adaptation Strategy, CLIMAX PO is piloting a number of actions in relevant and representative areas of the Po River Basin to test them and transform them in guidelines and policy recommendations at local, regional, national and EU level and replicate them across the basin and beyond through a peer-to-peer approach.

Specifically, some areas involved in the various actions are:

- The urban areas of Milan, Bologna and Turin
- The hydraulic hub of Milan
- The northern Lambro sub-basin
- The contributing basins of the lakes of Como, Maggiore, Iseo, Idro and Garda
- The agricultural areas related to the territory of Piedmont, Lombardy and Emilia-Romagna

To support the development, implementation, monitoring and enforcement of the EU legislation and policy on climate action, including by improving governance at all levels, in particular through enhancing capacities of public and private actors and the involvement of civil society

Improved governance and capacity building are some of the key words of the project.

CLIMAX PO is setting up an integrated governance approach (MGD – Multi level Governance Deal) for the whole Po River Basin with the mission of leading the implementation of the Italian National Adaptation Strategy. The MGD will have dedicated task forces and a programme for stakeholders' engagement (via Regional Stakeholder Boards) and extended capacity building for public administrations and private actors both with a technical and investment approach, as well as an awareness raising purpose, involving schools and local communities.

The MGD will also have a dedicated task force (and a project Work Package) on the monitoring of the implementation of the Italian NAS, including regional and national spending for adaptation.

To catalyse the large-scale deployment of successful technical and policy-related solutions for implementing the EU legislation and policy on climate action by replicating results, integrating related objectives into other policies and into public and private sector practices, mobilising investment and improving access to finance.

CLIMAX PO creates the technical framework for the implementation of the NAS with a toolbox of online softwares, guidelines, models, data sets and training programmes dedicated to the main actors of the process but open also to other private and public stakeholders (i.e., the Adaptation Platform).

CLIMAX PO creates the cultural framework via stakeholder engagement and capacity building and a strong communication and dissemination component.

CLIMAX PO tests good practices and systematically extracts technical guidelines and policy recommendations for exploitation and replication.

CLIMAX PO has an extended replication action with the expected result of introducing climate adaptation in the regular workflow of district, regional and local authorities in the Po River Basin and earmarking funding streams for adaptation: this will lead to updating existing plans (first of all, the RBMP and the FRMP) with adaptation measures and introducing a climate adaptation approach in all district and regional policies.

CLIMAX PO also includes the coordination and integration of public and private funding with a dedicated task force of the MGD and dedicated project tasks in WP2 and dedicated capacity building in WP4.

How CLIMAX PO addresses the scope of the topic description in the Call document:

SIPs falling under this category aim to implement climate change adaptation strategies or plans addressing specific climate change vulnerabilities (e.g. coastal areas, drought or flood prone areas) or vulnerable sectors (e.g. water, agriculture, forestry, public health), using ecosystem-based approaches where relevant

CLIMAX PO aims at implementing the Italian NAS in the Po River Basin District with a specific focus on the broad water management component, which means addressing all climate change vulnerabilities related to water (flooding, droughts, soil degradation) and with a specific focus on water management in agriculture (WP8), in metropolitan and diffuse urban areas (part of WP6), in alpine lake areas (WP5) and in coastal areas (WP7).

Nature and Ecosystem-based approaches are taken in consideration whenever possible and, in particular, WP6 focuses on nature-based solutions for riparian area management, and priority ecosystem services and green infrastructures. CLIMAX PO will produce guidelines and policy recommendations on this topic and will compare ecosystem-based approaches with grey traditional measures.

SIPs are expected to implement a chosen set of actions in the corresponding adaptation strategy or plan to be financed by LIFE. Measures funded via the LIFE programme should complement measures funded from national sources or from other relevant EU funding programmes, in order to implement an overarching adaptation strategy or plan.

Applicants should demonstrate how and to what extent the project will implement the strategy, plan or roadmap. The project therefore should include actions to help mobilise complementary funds that can finance actions beyond the scope and timeframe of what is funded by LIFE, like measures to integrate climate considerations in private investment decisions.

The SIP should include a combination of actions that contribute directly to the implementation of measures – and achievement of targets – of the SIP foreseen to be financed by LIFE

The SIP should include horizontal actions that facilitate the implementation of the overall strategy or plan, such as capacity-building

CLIMAX PO is planning to use the LIFE in 3 strategic ways:

- Horizontal activities aimed at creating the technical and cultural framework for the overall implementation of the National Adaptation Strategy (integrated governance, active stakeholders engagement, capacity building, shared technical tools, coordination of public and private funding, monitoring)
- Innovative pilot actions in representative areas and sectors of the River Basin to make them shining examples and good practices generating guidelines and policy recommendations
- Exploitation and replication actions aimed at triggering the uptake and further investments in adaptation measures

CLIMAX PO, with a task force of the MGD dedicated to coordination of public and private funding is expected to mobilize an initial 420+m€ of regional and national funding and then continue the integration of funding via dedicated activities (in WP2), new EU projects, contributions to the update of plans and resources, embedding adaptation in the following programming periods (2028-2034) and constantly earmarking funding streams for climate adaptation.

This action is ensured by the direct involvement of ADBPO and the 3 main Regional administrations of the Po River Basin (Piemonte, Lombardia, Emilia-Romagna).

CLIMAX PO has a dedicated component to water management in agriculture with innovative pilot actions and capacity building that aim a providing tools and ideas to trigger private investments in the sector.

The project has an extensive stakeholder and capacity building component dedicated also to private organisations on financing for climate adaptation both in rural as well as in urban areas.

1.5 Upscaling results of other EU funded projects *(n/a for stage 1)*

Upscaling results of other EU funded projects *(n/a for stage 1)*

Explain if and how the proposal builds on or up-scales results of other EU-funded projects.

There are more than 300 different projects former financed under LIFE, FP7, H2020 and Horizon Europe programmes focusing on climate adaptation planning issues, engagement of public authorities and financing of adaptation and mitigation measures. Each has ensured its added value in the development of the pathway towards a climate resilient economy.

Also CLIMAX PO is built upon the experience gained from more than 30 previous projects, continuous this path and goes beyond it by creating new ground for overall adaptation planning and implementation a River basin district level.

In the table below, some of the most significant projects are identified as having the highest added value and linkage with CLIMAX PO.

Project are divided into 3 categories:

a. **Projects contributing to implement the Italian NAS in the Po River plane**

Projects like these have a history in integrating complementary funding, already have a mechanism in place and a mobilised network of relevant stakeholder that could support and interact with CLIMAX PO actions contributing to the overall implementation of the NAS

b. **Projects offering technical tools and methodologies for adaptation** in urban centres, rural areas, tackling water management issues, restoration of connectivity of water and sediment flows, reduction of hydrological alteration, etc.

c. **Projects offering horizontal tools and methodologies** for capacity building, stakeholder engagement, multi-level governances, peer-to-peer learning

a. **Projects contributing to implement the Italian NAS in the Po River plane** that have a history in integrating complementary funding, already have a mechanism in place and a mobilised network of relevant stakeholder that could support and interact with CLIMAX PO actions contributing to the overall implementation of the NAS

| EU funded project | Purpose | CLIMAX PO Added Value |
|---|--|--|
| LIFE Integrated Project PrepaAIR (www.lifeprepair.eu) | coordinated by CLIMAX PO partner RER (Emilia-Romagna Region), focuses on implementation of regional air quality plans in the Po River basin district | CLIMAX PO builds upon the experience gained by some of the regional partners in an integrated approach at river basin district level, including coordination of complementary funding, multi level governance, stakeholders engagement, capacity building (direct link through several project partners). |
| LIFE Integrated Project GESTIRE 2020 (www.naturachevale.eu) | coordinated by CLIMAX PO partner RLombardia, focuses on implementing the Habitats and Birds directive in the Lombardia region | CLIMAX PO builds upon the experience gained by Lombardia Region in an integrated approach at river basin district level, including coordination of complementary funding, multi level governance, stakeholders engagement, capacity building. It also provides knowledge on nature-based solutions and an ecosystemic approach to the river basin and potential integration with other LIFE subprogrammes. (direct link through two partners). |
| b. Projects offering technical tools and methodologies for adaptation in urban centres, rural areas, tackling water management issues, restoration of connectivity of water and sediment flows, reduction of hydrological alteration, etc. | | |
| EU funded project | Purpose | CLIMAX PO Added Value |
| LIFE Integrated Project DUERO (www.lifeduero.eu) | Project focused on the implementation of the river Duero basin management plan in the Central-South part of the river Duero basin | CLIMAX PO will use the experience gained by the river basin managing authority in natural infrastructure (i.e., natural water retention measures), improved public participation, stakeholder engagement and communication, green economy (i.e., valuation of watershed environmental services) and better governance of water resources in similar conditions of risk of droughts and flood. |

| | | |
|--|--|--|
| <p>LIFE Sand Boils (www.lifesandboil.eu)</p> | <p>Project focused on nature-based solutions to mitigate flood risk related to the reactivation of sand boils in the Po River. There are at least 130 sites in the Po River where this phenomenon can be observed</p> | <p>CLIMAX PO will use the knowledge developed to mitigate flood risk and the cooperation with the the Hungarian Danube River Basin managing authority for peer-to-peer exchange and replication. (direct link through 2 partners)</p> |
| <p>LIFE LIFEEL (www.lifeel.eu)</p> | <p>The project involves the Italian competent bodies (ADBPO and Regions) that have signed the “Memorandum of Understanding for a sustainable and unified management of fisheries and the protection of fish stocks in the Po River”, promoting and developing a common and shared governance</p> | <p>CLIMAX PO will use the knowledge developed from the development of nature-based solutions and ecosystemic approaches that have an impact of water management and biodiversity (i.e., the plan for the restoration of longitudinal connectivity of the inland waters). (Direct link through 3 partners)</p> |
| <p>LIFE Adaptate (www.lifeadaptate.eu)</p> | <p>Project aimed to increase the commitment of European municipalities by upgrading SEAPs to SECAPs by addressing and focusing on development of local adaptation plans and methodologies.</p> | <p>CLIMAX PO will use and adapt LIFE Adaptate methodologies, data gathering practices and results, including on engagement of different stakeholders focusing and tackling climate adaptation in urban centres.</p> |
| <p>LIFE VenetoADAPT (www.venetoadapt.it)</p> | <p>Project aimed to tackle hydrogeological risk and heat island effect in metropolitan and diffuse urban centres of the Po River plain.</p> | <p>CLIMAX PO will use guidelines developed by IUAV on adaptation in urban centres related mainly to hydrogeological risk and heat island effects and the opportunities offered by the use of green and blue infrastructures (SOGESCA common partner).</p> |
| <p>LIFE Helpsoil (www.lifehelpsoil.eu)</p> | <p>Project aimed at the application of these conservation agriculture techniques for sustainable farming in the Po River plain and in the nearby Alpine and Apennine foot-hills.</p> | <p>CLIMAX PO will use the initial procedures and network of contacts supporting ERSAF project partner in developing the capacity building programme on soil management in conservation agriculture. (ERSAF common partner)</p> |
| <p>H2020 – NEXOGENESIS (www.nexogenesis.eu)</p> | <p>Project aimed at facilitating the next generation of effective and intelligent water-related policies utilising artificial intelligence and reinforcement learning to assess the water-energy-food</p> | <p>CLIMAX PONEXOGENESIS will use the coherent WEF nexus framework for the assessment of potential impact pathways of implementing new policy objectives (WFD, RED, CAP, SDGs, Paris Agreement) in the nexus, including: (i) biophysical and socio-economic modelling; (ii) stakeholder engagement together with; (iii) validation of NEXOGENESIS outputs; and (iv) use of the latest artificial intelligence techniques.</p> |

| | | |
|---|--|--|
| | ecosystem (WEFE) nexus. | (CMCC common partner) |
| c. Projects offering horizontal tools and methodologies for capacity building, stakeholder engagement, multi-level governances, peer-to-peer learning, financing | | |
| LIFE DERRIS www.derris.eu | Project that involves the public administration and small and medium enterprises (SMEs) to reduce the risks deriving from extreme weather events. | CLIMAX PO will use the innovative models of PPP and its analysis of innovative financial instruments to fund climate adaptation actions and insurance opportunities to support SMEs. |
| H2020 – ARCH www.savingculturalheritage.eu | Project focuses on Climate adaptation measures and Innovative Financing for Climate Change Adaptation in Urban Centres. | <i>CLIMAX PO will use the analysis and categorisation of innovative financing tools (public and private) to integrate the work of the MGD task force dedicated to the integration of complementary funding with further project-based opportunities.</i> |
| H2020 CoME EASY (https://www.european-energy-award.org/eu-project-come-easy) | Project created an open platform with supporting tools and materials for innovative and sustainable planning and empowered public authorities in planning, implementing and monitoring sustainable energy and climate policies. | From these projects necessary knowledge and lessons learned on planning, engagement, development, financing and/or implementation of the climate measures will be obtained and applied in CLIMAX PO. |
| H2020 - mPOWER (https://municipalpower.org/) | Project enable an in-depth, wide-scale and systematic peer-to-peer learning programme among at least 100 local public authorities, in order to replicate innovative best practices in municipal planning and developing ambitious climate and energy transition plans. | |
| H2020 - Simpla (http://www.simpla-project.eu/) | Project realized an ambitious, innovative work-plan, encompassing capacity building and coaching (on-site and via the web), enhancement of multi-level governance looking for synergies and economies of scale, extensive involvement of public authorities and stakeholders, promotion of mutual learning and best practices. | |

1.6 Synergies and co-benefits with other LIFE sub-programmes (n/a for stage 1)

Synergies and co-benefits with other LIFE sub-programmes (n/a for stage 1)

Describe synergies with other LIFE sub-programmes (Nature and Biodiversity, Circular Economy and Quality of Life, Climate Change or Clean Energy Transition). Describe spillover effects (co-benefits) in addition to those targeted by the project. If possible, quantify the contribution.

Identify the planned activities/tasks that address these policy objectives of other LIFE sub-programmes.

As a strategic, integrated project, CLIMAX PO is intrinsically constructed to be as inclusive as possible as to engagement of relevant actors in different fields of sustainability that integrate a general approach aimed at climate adaptation.

CLIMAX PO foresees horizontal activities aimed at an inclusive governance (WP2), dedicated capacity building for soil conservation (WP4), piloting ecosystem based solutions (WP6) and nature-based solutions (WP6), pilot actions on land degradation neutrality and sustainable use of the water resource in agriculture (WP8) all with a view to develop technical guidelines and policy recommendations to make all good practices immediately replicable within the district and embed adaptation in existing plans, such as the RBMP or renaturation plans.

Also, CLIMAX PO foresees networking (WP10) with existing LIFE strategic projects working in the same area and cooperation with the actors implementing them (MGD in WP2).

In particular, CLIMAX PO foresees synergies and spill over effects with other LIFE sub-programmes in the following way:

NATURE and BIODIVERSITY sub-programme: boosting and integrating the implementation of the EU's policy objectives for halting and reversing loss of wildlife habitats and species across all sectors

The peripheral vegetated belts that line the watercourses represent natural environments capable of offering a high number of ecosystem services from which the environment and society can benefit, including the provision of habitats for animal and plant species. Nevertheless, the expected effects of climate change constitute a risk factor for the riparian vegetation. These effects are attributable both to the expected variations in the flow rate (removal of vegetation during extreme events, reduced availability of water in dry periods) and to the increase in temperatures (favourable conditions for invasive species).

CLIMAX PO dedicates WP6 to nature-based solutions for riparian area management, priority ecosystem services and green infrastructures and foresees the development of guidelines and a comparison between ecosystem services and traditional grey infrastructures. Further synergies and co-benefits are related to the networking and cooperation with the LIFE IP Gestire lead by the CLIMAX PO project partner Lombardia Region and focused on the conservation of biodiversity and supporting the Natura 2000 network.

Also, WP5 addresses the assessment, planning, resilience and sustainable management of water storage capacity of regulated alpine lakes and artificial reservoirs and the sustainable management of sediment, which have a direct impact on environmental protection needs, such as biodiversity and ecosystem habitats, water quality management.

In specific, Task 5.2 will include an action of the evaluation of the availability of habitats for aquatic fauna (fish fauna, macroinvertebrates, particular aquatic species protected and mentioned in the Habitat Directive) and their modification due to flushing operations will be quantified following the MesoHABSIM approach (meso-scale habitat simulation model), by referring to in the ISPRA MLG 154/2017 manual.

Therefore, developing guidelines and policy recommendations on this topic should generate significant spillovers on the sub-programme priorities.

CIRCULAR ECONOMY and QUALITY of LIFE sub-programme: supporting the transition to a circular economy and protecting and improving the quality of EU's natural resources, including air, soil and water among others

CLIMAX PO contributes to a sustainable and climate-resilient economy by engaging public and private stakeholders in a cultural and technical framework fostering awareness on climate adaptation in public planning and in private activities. Dedicated capacity building is organised in WP4 and awareness raising in WP10.

WP4 foresees a dedicated training for local governments to embed climate adaptation in their local planning through a gap analysis of their existing urban plans, including Sustainable Energy and Climate

plans under the Covenant of Mayors. This will allow synergies with local plans that focus on mitigation of emissions and will allow CLIMAX PO partners to advocate adaptation and integration of nature-based and ecosystem-based measures in mitigation plans as alternative ways to reduce emissions and improve air quality.

Networking and cooperation with the LIFE IP PREP-AIR lead by the project partner Emilia Romagna Region should increase synergies and spillovers as PREP-AIR focuses on the implementation of Regional Air Quality plans in the Po River Basin.

CLIMAX PO dedicates WP8 to sustainable use of water in agriculture and soil protection through a participated pilot action on LDN (Land Degradation Neutrality), hence contributing to the sub-programme priority: *protecting the quality of EU soil, preventing soil degradation through sustainable practices of soil and land management*

Finally, the whole project contributes to the following sub-programme priorities:

achieving and maintaining a good status of the EU water bodies

ensuring clean surface water and groundwater, in sufficient quantities for human and other species, including by increasing efficiency of water use

CLEAN ENERGY TRANSITION sub-programme: building capacity, stimulating investments and supporting implementation of policies focused on energy efficiency and small-scale renewables.

CLIMAX PO dedicates WP5 to address the assessment, planning, resilience and sustainable management of water storage capacity of regulated alpine lakes and artificial reservoirs. This activity has a strategic purpose on the water management of the whole river basin. Among other, it has a direct impact on hydroelectric power generation. In fact, in a scenario of changing climatic conditions, the restoration of reservoir volumes and the monitoring of the downstream fluvial environment is advantageous for several reasons, including a greater modulation capacity of the reservoir volume to produce renewable energy.

CLIMAX PO focuses on water management in a view to adapt to extreme weather conditions such as droughts trying to minimize the effect on the water flow. This also has spill-over effects on renewable energy production planning and implementation, such as for the micro-hydroelectric sector.

Finally, WP4 foresees a dedicated training for local governments to embed climate adaptation in their local planning through a gap analysis of their existing urban plans, including Sustainable Energy and Climate plans under the Covenant of Mayors. This will allow synergies with local plans that focus on mitigation of emissions, energy efficiency and production of energy from renewable sources as SECAPs include common stakeholder engagement in both energy and climate-related actions.

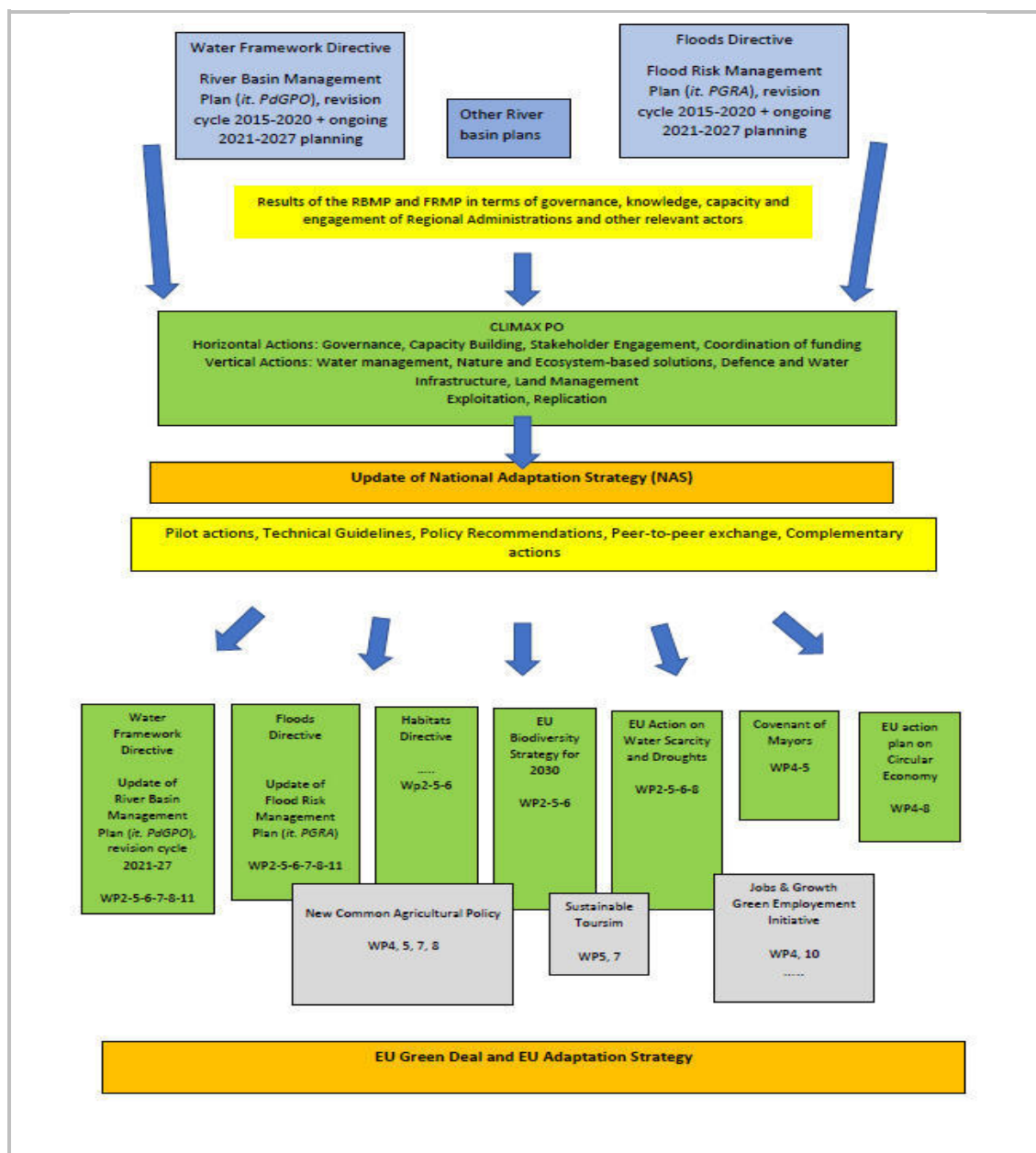
1.7 Synergies and co-benefits with other EU policy areas *(n/a for stage 1)*

Synergies and co-benefits with other EU policy areas *(n/a for stage 1)*

Describe the synergies and positive spillover effects (co-benefits) with other EU policy areas (for example agriculture, health, civil protection, jobs and growth, etc.). If possible, quantify the contribution.

Identify the activities/tasks that address these other EU policy objectives.

The following scheme summarizes the synergies CLIMAX PO will have with EU policies both directly included in the LIFE priorities as well as co-benefits with other policy areas.



Agriculture

As to other policy areas, the first in terms of quantity and quality receiving positive spillover effects is definitely the **new common agricultural policy 2023-2027**.

CLIMAX PO, due to its water and adaptation focus contributes to the CAP's higher green ambitions, to the Green Deal targets and, indirectly, to its eco-schemes aimed at providing stronger incentives for climate and environment-friendly farming.

CLIMAX PO contributes to 4 of the CAP's key objectives:

- Climate Change
- Environmental care
- Landscapes
- Competitiveness

In general, all CLIMAX PO activities are oriented towards creating a cultural and technical framework fostering climate adaptation and better environmental management of resources: water and soil are the main focus of most of the activities as the project puts a lot of stress on creating solutions to floods and droughts both in urban as well as in rural areas.

CLIMAX PO works on improving climate, environmental and landscape conditions for and with the agricultural sectors through several actions.

WP5 addresses the assessment, planning, resilience and sustainable management of water storage capacity of regulated alpine lakes and artificial reservoirs and the sustainable management of sediment, which have a direct impact on environmental protection needs and downstream users, mostly agriculture.

WP7 has a focus on coastal extreme water events, as they have direct impact on coastal agriculture and aquaculture due to floods and saline intrusion and damaging ecosystem services.

CLIMAX PO dedicates WP8 to sustainable use of water in agriculture and soil protection through a participated pilot action on LDN (Land Degradation Neutrality).

Finally, the project promotes the increase of competences and skills among farmers with dedicated capacity building actions on LDN and conservation agriculture (WP4) and general awareness raising on adaptation (WP10).

Tourism

CLIMAX PO has positive spillover effects on Tourism policy contributing to:

- Stimulate competitiveness in the European tourism sector
- Consolidate Europe's image as a collection of sustainable, high-quality destinations

This is done in an indirect way by improving environmental security within the Po River Basin both in rural (WP5, 7, 8) as well as urban centres (WP4, 7, 8) and by supporting a more sustainable and better-looking landscape (WP5, 6 and 8).

JOBs and Growth

CLIMAX PO supports the 8 years old, but still very actual, Green Employment Initiative Communication that presents an integrated framework to allow labour market and skill policies to play an active role to support this ecologic transition.

The Communication highlights the employment challenges and opportunities of the existing transition towards a green, low carbon, energy and resource-efficient economy and CLIMAX PO supports it with a dedicated capacity building and awareness raising campaign aimed at increasing the culture of climate adaptation in several professional fields (WP4 and 10):

- Public authorities and utilities
- Agriculture and fishing (farmers, fishermen, agronomists, etc .)
- School education
- Engineers, chemist, biologist, lawyers, etc.

Health

The peripheral vegetated belts that line the watercourses represent natural environments capable of offering a high number of ecosystem services from which the environment and society benefit, including the removal of pollutants (nitrogen, phosphorus, pesticides) present in the aquifers and in the hypogeal areas adjacent to the courses of water.

CLIMAX PO supports nature-based solutions, ecosystem services and renaturation of the riverbanks (WP6 and coordinated actions) therefore contributing to reduce pollutants that could be harmful for the environment and for humans.

2. IMPACT

Fill in **only** section 2.1 at stage 1. Fill in **all sections** at stage 2.

2.1 Impact and ambition

Impact and ambition

Define the effects of the project (during the implementation and up to 5 years after its end).

Be specific and provide information about impacts that are a result of your project, and separately, the impacts of the complementary measures and actions.

In addition to the expected specific results, indicate the level or degree of implementation of the targeted plan/strategy/action plan that will be achieved through the SIP/SNAP project.

Wherever possible, use quantified indicators and targets. Show the steps of your calculation and base yourself on the activities mentioned in your work plan. Justify and substantiate the baselines, benchmarks and assumptions you used, making reference to relevant publications, studies or statistics. Try to use the same methodologies for calculating impacts: (not different methodologies for each partner, region or country). Extrapolations should preferably be prepared by one partner. (n/a at stage 1)

Note: In addition to the description above, include quantified indicators in Part C of the application forms (both horizontal KPIs for the LIFE programme as well as any specific KPIs relevant to the proposal).

CLIMAX PO has selected 241 broad action proposals included in the NAS that are applicable to the Po River basin district and targeted by CLIMAX PO (see attached “Overall Implementation” xls file).

In this regard, there is a significant number of action proposals that are broadly applicable to the district even though there is no indication of roles and responsibilities, targets, and deadlines (beside a general “to be implemented before/after 2020”).

NAS proposal actions, being so broad in scope and with limited details, need to be implemented with several different specific actions and integrated in existing planning tools, above all the River Basin Management Plan.

For this reason, the project is focusing on barrier removal, coordinated governance, creation of shared tools and methodologies, capacity building and stakeholder engagement as horizontal activities to foster the implementation of the overall strategy in the district.

Also, the project dedicates pilot approaches on specific focus areas in order to demonstrate good practices that can be replicated in other areas of the district and support the demonstration of performances of ecosystem-based approaches in comparison to conventional “grey” measures.

Coherently with its overall objective, CLIMAX PO key effects in the medium and long term include:

- **Fostered overall implementation of NAS adaptation measures** in the Po River basin district
- **Systematic and coherent integration** and monitoring of climate change adaptation in the Po River Basin Management Plan and related planning tools at regional and district level
- **Reduced economic and social impacts** (damage and losses) from weather and climate related extreme events under current (by 25%) and future scenarios (by 50% with reference to 2050s and RCP4.5)
- **Improved climate adaptation governance** at river basin district level, coordinating the national, regional, local, and sectoral levels, and creating climate risk partnerships in the district
- **Increased knowledge on nature-based and ecosystem approaches** to climate adaptation in the river basin

By the end of the project and for the following years, CLIMAX PO expects to have put in place and continue to implement:

- A coordinated Multilevel Governance Deal with dedicated task forces engaging the National, Regional and Local level thanks to its strong consortium and their network of key stakeholders representing all decision-making level
- A coordinated approach to river basin adaptation management, starting from the River Basin Management Plan and having streamlined the planning process
- A coordinated approach to funding adaptation measures in the River Basin with a dedicated task force and a multisectoral approach
- A bottom-up monitoring system collecting data and providing solutions to decision-makers and local actors
- A toolbox of online softwares, guidelines, models, online training programmes, policy schemes

- A replication scheme to enlarge the effects of pilot actions to other areas of the district and to other districts as well
- A civil society engagement scheme to keep it in a knowledge loop with technicians and decision-makers

Coherently with its specific objectives, CLIMAX PO expected results and impacts in the short and medium term are:

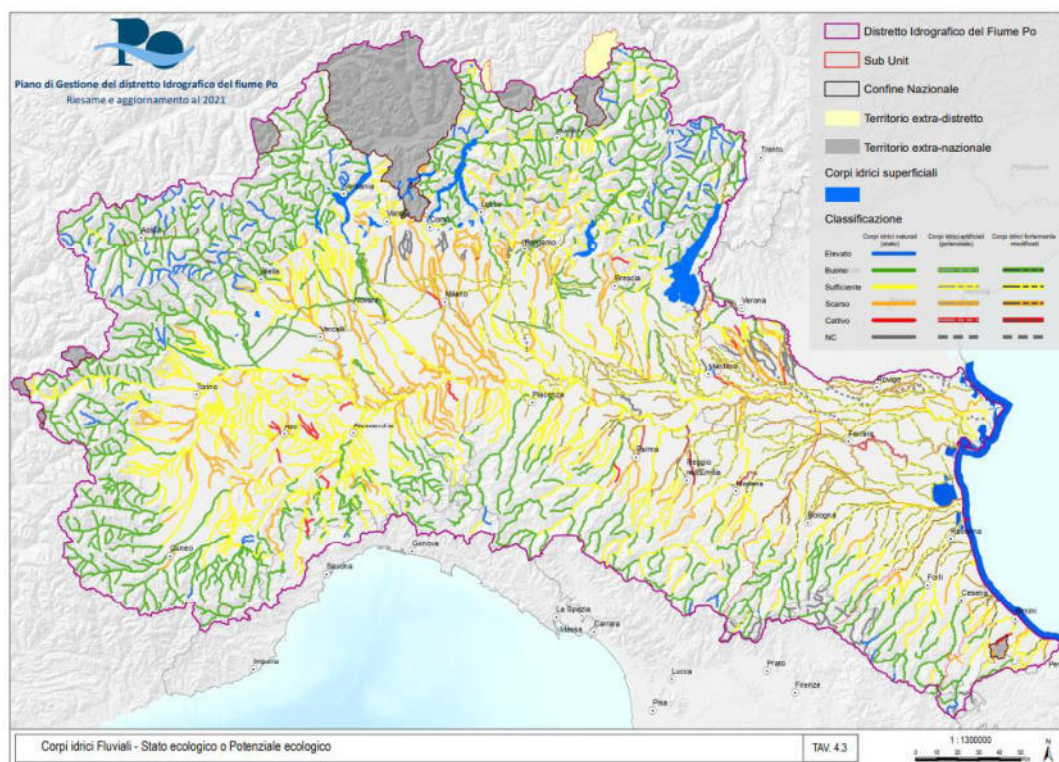
- Mapping and review of planning and legislative tools coherently with the NAS and using the River Basin Management Plan as a base for the project
- A Multilevel Governance Deal (MGD) bringing together all the National, Regional and Local decision-makers acting on the river basin district and divided in dedicated task forces
- A dedicated Adaptation Observatory that contributes to the monitoring and evaluation of the implementation of adaptation in the river basin
- A specialised task force of the MGD dedicated to coordination of complementary funding and mobilization of additional funding, creating a coherent flow of resources to implement adaptation measures
- Coordination of at least **447.876.192,26 €** of complementary funding
- A coherent flow of EU project proposals to integrate implementation
- Policy recommendations at EU, National and Regional level
- Institutionalisation of adaptation planning at River Basin District level (adaptation measures explicitly included in all planning tools)
- A fully equipped and operational climate information and knowledge platform fostering adaptation across water-intensive sectors (i.e., agriculture, energy production, residential compartment),
- A Climate risk index at sub-basin scale
- Regional and/or District Stakeholder Boards involving local authorities (municipalities or association of Municipalities) as well as technicians, environmental and socio-economic associations
- A capacity building programme implemented at consortium, local, regional and national level on technical and financial aspects related to adaptation; integration of funding sources; policy aspects
- Improved competences of technicians and decision makers on adaptation planning and funding
- A network of projects and initiatives focused on adaptation in the district
- Replication actions at district, national and European level
- Fully developed and replicable demonstration adaptation projects in identified focal areas to speed up and leverage adaptation across and beyond the Po River Basin district, generating the expected good practices:
 - Improved integrated water management of great lakes (Garda, Como, Maggiore, Iseo, Idro) and integrated water retention plans (task 5.1)
 - Improved water quality and more sustainable management of sediment in reservoirs and improved integrated water retention and sediment management plans (task 5.2)
 - Improved riparian vegetation management through nature-based solutions transferred into guidelines for improving planning tools such as the riparian vegetation management plans (task 6.1)
 - A methodology for the evaluation and identification of priority ecosystem services (task 6.2)
 - Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin (task 6.3)
 - Reduction of hydrogeological vulnerability through monitoring and early-warning in metropolitan areas (task 7.1)
 - Improved monitoring and warning system for coastal extreme water events in the Po River delta (task 7.2)
 - Improved and more rational use of water in agriculture to cope with future droughts via better management of canals and smart artificial water reservoirs – transferred in guidelines to improve the river basin management plan (task 8.1)
 - Improved competences among farmers on conservation agriculture practices (task 8.2)
 - Land Degradation Neutrality implemented in decision-making process at National and River basin level (task 8.3)
 - Demonstration of the performance of ecosystem-based approaches in comparison to conventional “grey” measures (WP5 to 9)

Indicators and quantified impact objectives

To quantify the impacts of the project actions, indicators relating to Water efficiency, Water quality and specific KPIs, were selected as follows:

- Reduction in area or length of surface water bodies and groundwater bodies whose ecological status is affected (in the context of the Water Framework Directive)
- Reduction in new water supplied, due to appropriate water saving measures (i.e., through increasing water reuse and / or avoiding water losses) in m³ / year
- Reduction of vulnerability for strategic sectors in the Po River Basin area

For the first indicator, the baseline was defined starting from the monitoring data used for the 2021 review and update of the "Po River Basin Management Plan" ([link](#)) carried out by the Po River Basin Authority, project leader. The results of the elaboration allow to **define the length of surface water bodies and groundwater bodies** whose ecological status is affected (less than good) equal to 15,370.47Km, or approximately 64% of the total length.



From the reported graphic representation of the River Water bodies, it is possible to identify the highest levels of impairment of the ecological status in Lombardy, Piedmont, Emilia-Romagna, that is, in the most densely populated urban areas and / or in the vicinity of industrial production centres. The project actions of WP5 are concentrated on some of these areas, with a pilot approach that is therefore of interest also in terms of replicability over time. Conversely, both WP6 and the complementary funds act particularly on less urbanized, protected and / or highly developed areas of the primary sector (agriculture and livestock). For these reasons, at this stage, **a reduction in the length of surface water bodies and groundwater bodies whose ecological status is affected is estimated (in the context of the Water Framework Directive):**

- *Up to 5% of the length of surface water bodies and groundwater bodies whose ecological status is affected due to the direct effect of the project actions*
- *Up to 20% by the end of the project, due to the replication of pilot actions, the dissemination of methodologies and good practices and in consideration of the effect of complementary funds*
- *Up to 30% within 5 years after the end of the project*

For the second indicator, reduction of the new water supply (m³), the baseline was defined starting from the estimates of the average annual flows derived in the Po River Basin destined for civil, energy-intensive, agricultural and productive uses. This indicator is shown in the "Water Balance Plan" and is the result of a specific methodology for calculating ADBPO's liability. Although purely predictive, it represents the highest degree of monitoring currently used within the river basin district planning tools. **The value of the average annual flows derived in the Po River Basin is equal to 20 billion m³ / year** and about 60% is used exclusively in agriculture. The direct effect of the pilot actions and the ability to replicate them over time will be relevant to reduce this value.

For these reasons, **a reduction in the new water supply is estimated at this stage due to adequate water saving measures (i.e., by increasing water reuse and / or avoiding water losses) referred to**

the whole final uses (i.e., agriculture, hydropower, drinking water, industrial) as identified in predictive models:

- Up to 3% due to the direct effect of the project actions
- Up to 10% due to the replication of pilot actions, the dissemination of methodologies and good practices and in consideration of the effect of complementary funds
- Up to 15% within 5 years after the end of the project

Further breakdown of actual water saving per user group will be provided, whenever they become available/ can be realistically determined during the course of the project.

These reduction percentages have been estimated based on partners' experiences gained in previous activities similar to the project ones. Moreover, standardized indices will be used to evaluate effective water saving.

The direct and indirect impacts of the project are related to the hazards deriving from climate change on multiple strategic sectors in the district territory. For this reason, as described in WP3 and WP9, the consortium will identify quantitative indicators of exposure and sensitivity of the territory by strategic sector and climatic hazard. To date, there is no unique definition and use of these indicators at local level, therefore, these indicators will be explained in the first 9 months of the project in synergy with the provisions of the NAS for the "Climate adaptation plans" of local authorities and in particular from the "Covenant of Mayors".

Consequently, in this phase, in order to fully represent the project's ability to globally implement the national adaptation strategy at the river basin level, as described below, it is deemed appropriate to report a single specific KPI relating to the flood hazard and the Health sector: "population density exposed to floods hazard in the whole regions' territories of the District ". This indicator is an example and it will be revised during the first nine months of the project considering the portions of the regional territories actually belonging to the District. Indeed, the reference baseline has been developed starting from the "[Mosaicatura nazionale ISPRA](#)" (v. 5.0 - 2020, starting from the areas with hydraulic hazard with a return time between 20 and 200 years by ADBPO on the provisions of Legislative Decree 49/2010) that does not provide data at the district scale. Using this data, the **"population density exposed to the Floods hazard in the whole regions' territories of the District" has been computed and it is equal to 51 pop / km².**

Moreover, using this indicator it is possible to estimate the weight of each considered region. For instance, according to the reported data, a significant impact on this indicator is played by Emilia-Romagna (with a weight of 24 inhabitants per km²) where the project pilot actions are envisaged, particularly in WP7 invest. The complementary funds, WP4 and WP10, and, more generally, the dissemination of results and good practices at the institutional and municipal level, will allow amplifying the direct and indirect impacts on the identified indicator but also on those specific to other sectors that will potentially emerge from the project.

| Region | Regional Area (Km²) | Risk exposed population (pop) | Density of water related hazards exposed population (pop/km²) | regional weight on indicator (pop/km²) |
|-----------------------|---------------------------------------|--------------------------------------|---|--|
| <i>Liguria</i> | 5.416 | 438.480 | 81 | 3 |
| <i>Veneto</i> | 18.345 | 990.790 | 54 | 8 |
| <i>Marche</i> | 9.401 | 82.381 | 9 | 1 |
| <i>Lombardia</i> | 23.863 | 475.460 | 20 | 4 |
| <i>Toscana</i> | 22.987 | 1.209.407 | 53 | 9 |
| <i>Emilia-Romagna</i> | 22.445 | 3.143.341 | 140 | 24 |
| <i>Valle d'Aosta</i> | 3.261 | 16.095 | 5 | 0 |
| <i>Piemonte</i> | 25.387 | 278.158 | 11 | 2 |
| Total | 131.105 | 6.634.112 | 47 | 51 |

For these reasons, a **reduction in vulnerability is estimated for strategic sectors in the Po River Basin area** and in particular in the population density exposed to water related hazards in the district area, equal to:

- Up to 10% due to the direct effect of the project actions
- Up to 25% due to the replication of pilot actions, the dissemination of methodologies and good practices and in consideration of the effect of complementary funds
- Up to 35% within 5 years after the end of the project

During the project, the most updated data at the district scale will be used since the ones reported in the present document are provided with an illustrative purpose, as already highlighted. Moreover, other specific

indicators will be identified during the first nine months of the project (WP9) and made available at the end of the project.

Complementary measures

CLIMAX PO has secured ca. **447.876.192.26 € of complementary funding** from European, National and Regional public sources (out of which 343.894.979.26 € already granted).

Complementary measures have been planned to amplify the overall impact of the project in terms of large and expensive interventions that can be funded only through Regional and National budgets.

At this stage, complementary actions are mainly focused on flood risk mitigation and prevention, and renaturation.

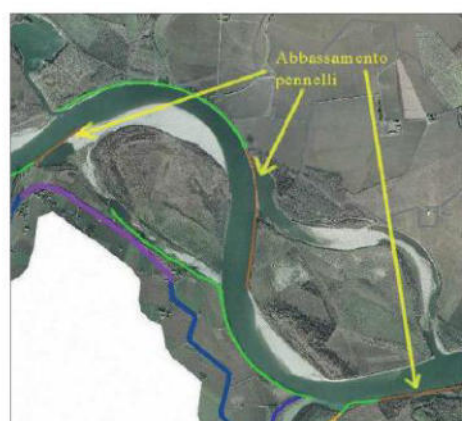
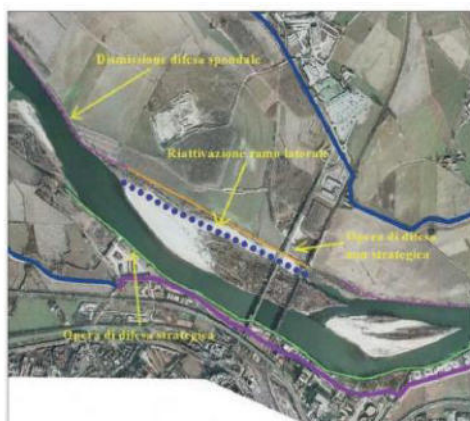
Nevertheless, there are also soft, strategic measures lead by ADBPO through the National budget focused on integration of planning tools, activation of river, lake, humid area and delta contracts and public engagement.

Complementary funding will be constantly integrated from regional and national budget and further funds will be mobilized during project implementation thanks to dedicated competences, structures and actions (tasks 2.4 and 2.5).

At this stage, the expected impacts of complementary measures foreseen is:

Renaturation of 37 priority areas between the Province of Pavia and the Province of Rovigo, connecting the Lombardia, Emilia Romagna and Veneto Regions in a territory of ca. 32,431 ha (ca. 178m€):

- Restoration of oxbows and abandoned branches
- Reactivation and reopening of abandoned oxbows and branches
- Reducing the artificiality of the riverbed; lowering groins
- Conservation interventions
- Participatory processes - communication and 15 technical facilitators



Schemes of model interventions to reactivate the river's morphological processes

- 1.000 km of Po River embankments object of Verification of stability and resistance, by ADBPO (National budget - 6.000.000,00€)
- 50.000 km² object of new DTM / orthophoto surveys and satellite interferometric data analysis, by ADBPO (National budget - 10.000.000,00€)

- 1 New district database with measures to increase efficiency of water supply for irrigation, industry, energy, and domestic use - Implementation and / or system enhancement of water accounting, by ADBPO (National budget - 2.000.000,00€)
- 82.788 km² object of research and improvement of the state of knowledge to reduce uncertainty - reconstruction of the relationship between land use changes, environmental impacts, and resilience of natural and anthropogenic systems to climate change, by ADBPO (National budget 750.000,00€)
- 146 water bodies for hydroelectrical power production object of research and improvement of the state of knowledge to reduce uncertainty - investigation of the effects of hydropeaking-thermopeaking phenomena, by ADBPO (National budget 75.000,00€)
- 50 river, lake, humid area, and delta contracts object of planning integration; strengthening of institutional cooperation, training and public participation, by ADBPO (National budget 6.300.655,00€)
- Monitoring supporting the implementation of Dir. 2000/60/CE, Water Balance and Underground water (National Cohesion and Development Fund (FSC 2021-2025) 3.028.024€)
- Pilot interventions to reactivate sand boils (ca. 2,8 m€)
- Improving inland waterways, with the objective of the reduction of road transport and the lowering of CO₂ emissions (ca. 2,7 m€)
- Embankments and gutters (new and maintained) in the Lombardia Region (ca. 42,0 m€)
- Embankments, traverses, controlled flooding areas in the Lombardia Region (ca. 83,0 m€)
- Flood risk mitigation and prevention in the Lombardia Region for Widespread measures of flood risk mitigation and prevention: embankments, new construction and adjustments in shape, gutters. (ca. 21,6 m€)
- Flood risk mitigation and prevention in the Lombardia Region will be dedicated to the completion of task 6.3 (Wild Lambro) (ca. 1,7 m€)
- Flood risk mitigation and prevention in the Lombardia Region will be dedicated to other action (ca. 6,0 m€)
- Forest and herbaceous buffer strips near arable land in the Piemonte Region (ca. 1,9 m€)
- Green infrastructures for water bodies in the Piemonte Region to implement the Water Balance Management Plan measures (ca. 6,0 m€)
- Improved land protection in Emilia-Romagna Region and sustainable water management, forestation, biodiversity preservation and support to farmers (ca. 26,0 m€ until 2022)
- Reduction of climate risk in Emilia-Romagna Region (ca. 23,3 m€ until 2027)
- Promotion of the development of adaptation plans at Municipal and Regional level in Emilia-Romagna Region and GECCO 2 project Interreg Italy-Croatia (ca. 0,5 m€)
- Reforestation project "Mettiamo radici per il futuro" in Emilia-Romagna Region (ca. 3,3m€)

Overall implementation of the national adaptation strategy at river basin level

Design and adoption of NAS are important milestones of adaptation processes, however without transposing them into sectoral plans and planning processes, and making them coherent with therein included provisions, it is unlikely that adaptation policy goals will be met.

CLIMAX PO will impact on:

- Making the Italian NAS operative and applied, that means refined and customised, at the river basin district and at lower water governance levels
- Catalysing and leveraging climate adaptation in water-intense productive and planning sectors; developing pilot demonstrations of both soft (i.e., governance) and hard (physical/tangible) adaptation actions that are replicable in other contexts and can serve as good practice examples
- Feeding back to the next climate adaptation planning cycle (update of the NAS and eventually implementation of NAP) as well as national climate risk assessment in Italy

Most parts of current regional plans are not explicitly addressed to implement the NAS for the water sector. CLIMAX PO will thus strengthen the mainstreaming of the issue, acting as a catalyst for inclusion and vertical integration.

In particular, CLIMAX PO enables and fosters all the action proposals included in the NAS that affect the Po River Basin. Being the NAS actions so broad, they will be narrowed down to district level through dedicated planning. In some case, CLIMAX PO will initially support part of the broad NAS action proposal (i.e., with a

pilot action) and will then support the replication of the action in different areas of the district via complementary measures and/or integrated sources of funding.

The activities of CLIMAX PO in the territory of the Po River Basin can be directly or indirectly connected with about 41% of the NAS action proposals, i.e., 241 divided into 10 sectors (identified in the NAS). The sectors "Water Resources" and "Po River Basin" are represented at 100% because they are consistent with the activities of the partners and the objectives of the project. On the other hand, other sectors do not have direct correspondence and are excluded. The following table summarizes the results of this numerical analysis of correspondence by sector.

| <i>Sector of action proposal</i> | Nr. of Action Proposal | Nr. of project Action | Nr. of complementary action | N° of Plan or Tool |
|---|------------------------|-----------------------|-----------------------------|--------------------|
| AGRICULTURE AND FOOD PRODUCTION | 24 | 22 | 4 | 2 |
| ALPINE AREA AND APENNINES | 24 | 20 | 6 | 10 |
| COASTAL AREAS | 4 | 2 | 3 | 1 |
| DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | 28 | 19 | 9 | 13 |
| ENERGY | 2 | 2 | | 1 |
| HYDROGEOLOGICAL INSTABILITY | 22 | 17 | 4 | 8 |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | 33 | 20 | 8 | 10 |
| PO RIVER HYDROGRAPHIC DISTRICT | 18 | 11 | 3 | 10 |
| URBAN SETTLEMENTS | 21 | 7 | 4 | 18 |
| WATER RESOURCES | 65 | 30 | 17 | 30 |
| Total | 241 | 150 | 58 | 103 |

The project supports the implementation of 150 NAS action proposals distributed across all sectors. Complementary funds and activities support (sometimes, partially) the implementation of 58 action proposals.

Overall, considering that the existing plans and instruments (or that are in the process of being finalized) focus on 103 NAS proposals for action, **the project aims to implement over 93% of NAS proposals for action, i.e., 225 out of 241** (see attached xls file: "CLIMAX PO - IMPLEMENTATION OVERVIEW"). When Work Packages or specific project tasks are similar and complementary to actions already funded with complementary funds, the project proposes an improvement, extension, or replication of the funded measures. In fact, part of the complementary funds will come from the implementation of the national NRRP or from regional policy choices and the implementation of adaptation plans at municipal level. Most of these instruments have prospects for implementation in limited areas of the district and therefore the project can add value to this local level experience to ensure full dissemination and adherence to the NAS throughout the district.

There are also action proposals for which no correspondence has been identified. They represent specific measures on issues only indirectly connected with the project. They are:

| Sector | Action Proposal |
|---|--|
| ALPINE AREA AND APENNINES | IDENTIFY AND STUDY THE VULNERABILITY OF ALPINE SOURCES TO CLIMATE CHANGE |
| DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | RESTORATION OF AN ADEQUATE CONTENT OF ORGANIC MATTER IN SOILS, LIMITING THE USE OF INORGANIC FERTILIZERS, AND INCREASING THE USE OF ORGANIC FERTILIZERS AND COMPOST, OR THE USE OF RESIDUAL AND WASTE BIOMASS. ELIMINATION OR MARKED REDUCTION OF CHEMICAL FERTILIZERS TO BE REPLACED WITH COMPOST CERTIFIED AS ORGANIC WASTE AND MASSIVE USE OF COMPOST TO RESTORE THE CHEMICAL-PHYSICAL BALANCE OF THE SOIL (CONTRIBUTING TO THE CAPTURE OF CO ₂); |
| HYDROGEOLOGICAL INSTABILITY | PROVIDE FOR A CHANGE IN THE PRACTICE OF EX-POST COMPENSATION TOWARDS AN INSURANCE POLICY AND RELATED LEGISLATION THAT ALSO GUARANTEES ECONOMIC REPERCUSSIONS TO SUPPORT PREVENTION; |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | START OF GREENING ACTIONS IN THE SCOPE OF THE NEW CAP 2014-2020 WITH THE OBJECTIVE OF ENHANCING AND EXPLOITING THE ECOSYSTEM REGULATION SERVICES (FOR EXAMPLE REMOVAL OF POLLUTANTS) |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | ADOPT A PLANNING CHARACTERIZED BY PREVENTIVE ACTIONS IN THE CATCHMENT AREA OF THE LAKE TO REDUCE NUTRIENT LOADS |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | MAINTENANCE AND RESTORATION INTERVENTIONS AIMED AT SLOWING DOWN THE COVERING OF WATER CAUSED BY ANTHROPIC ACTIVITIES, PREVENTING THEIR USE AS ABUSIVE LANDFILLS, REMOVING INVASIVE SPECIES |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | RESTORATION AND REBUILDING OF MANY SITES IN ORDER TO RESTORE SYSTEMS WITH SIZE SUITABLE FOR THE CONSERVATION OF THREATENED AND / OR EXTINGUISHING SPECIES |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | MONITORING OF KARST AND ALLUVIAL COASTAL AQUIFERS IN AREAS SUBJECT TO INTENSIVE AGRICULTURE WHERE THERE IS THE ASCENT OF THE SALT WEDGE. |

| | |
|--------------------------------|--|
| PO RIVER HYDROGRAPHIC DISTRICT | OPTIMIZED USE OF ECONOMIC INSTRUMENTS IN THE INTEGRATED MANAGEMENT OF WATER RESOURCES, SUCH AS THE REVIEW OF WATER RATES, REVIEW OF WITHDRAWAL FEES AND CONCESSIONS, ABOLITION OF FLAT RATES |
| PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF RISK REDISTRIBUTION MECHANISMS SUCH AS SOLIDARITY FUNDS AND INSURANCE INSTRUMENTS |
| WATER RESOURCES | ESTABLISH MINIMUM AND CERTAIN RULES FOR THE FINANCING OF STRUCTURES AND INFRASTRUCTURES; |
| WATER RESOURCES | INCENTIVES FOR LOW WATER USE INTENSITY PRODUCTS AND TECHNOLOGIES FOR THE USE OF POOR QUALITY WATER (GREY WATER); |
| WATER RESOURCES | DESALINATION THROUGH PHOTOVOLTAIC POWERED SYSTEMS; |
| WATER RESOURCES | INTRODUCTION OF MORE EFFICIENT INDUSTRIAL COOLING SYSTEMS; |
| WATER RESOURCES | INCREASE OF STORAGE POTENTIALS IN RURAL AREAS PRIVILEGING DIFFUSED, LOW ENVIRONMENTAL IMPACT AND MULTIPLE USE INTERVENTIONS |
| WATER RESOURCES | SUPPORT FOR THE CONSTRUCTION OF INDUSTRIAL AREA WATER INFRASTRUCTURES AND DUAL NETWORKS; |

The roadmap proposed in the NAS identifies 119 action proposals in 9 sectors with deadline before 2020. The rest has a deadline beyond 2020. Among the action proposals with deadline 2020, 54 action proposals in 8 sectors have already been implemented. Among the action proposal with deadline beyond 2020, 49 plans or tools have been put in place to support their implementation.

| Sector of action proposal and roadmap | Short term (before 2020) | | Short and Long term (Beyond 2020) | | Long term (Beyond 2020) | | n.d. | |
|---|--------------------------|------------------|-----------------------------------|------------------|-------------------------|------------------|---------------------|------------------|
| | Nr. Action proposal | Nr. Plan or Tool | Nr. Action proposal | Nr. Plan or Tool | Nr. Action proposal | Nr. Plan or Tool | Nr. Action proposal | Nr. Plan or Tool |
| AGRICULTURE AND FOOD PRODUCTION | 12 | 1 | | | 6 | 1 | 6 | |
| COASTAL AREAS | 2 | | 1 | 1 | 1 | | | |
| DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | 20 | 10 | | | 5 | 1 | 3 | 2 |
| HYDROGEOLOGICAL INSTABILITY | 9 | 4 | | | 8 | 3 | 5 | 1 |
| PO RIVER HYDROGRAPHIC DISTRICT | 8 | 6 | 2 | 1 | 6 | 2 | 2 | 1 |
| URBAN SETTLEMENTS | 6 | 4 | 10 | 9 | 2 | 2 | 3 | 3 |
| WATER RESOURCES | 25 | 11 | 1 | 1 | 29 | 13 | 10 | 5 |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | 15 | 9 | | | 17 | 1 | 1 | |
| ALPINE AREA AND APENNINES | 22 | 9 | | | 1 | 1 | 1 | |
| ENERGY | | | | | | | 2 | 1 |
| Total | 119 | 54 | 14 | 12 | 75 | 24 | 33 | 13 |

The project actions and complementary measures have the dual objective of satisfying the short-term action proposals (26 and 86 matches) and the medium and/or long-term ones (24 and 45 matches) or whose timeline has not yet been defined (8 and 19 matches respectively).

| Sector of action proposal and roadmap | Short term (before 2020) | | Short and Long term (Beyond 2020) | | Long term (Beyond 2020) | | n.d. | |
|---|--------------------------|--------------------|-----------------------------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|
| | Nr. Action Complementary | Nr. Action Project | Nr. Action Complementary | Nr. Action Project | Nr. Action Complementary | Nr. Action Project | Nr. Action Complementary | Nr. Action Project |
| AGRICULTURE AND FOOD PRODUCTION | 3 | 11 | | | 1 | 5 | | 6 |
| COASTAL AREAS | 2 | 2 | | | 1 | | | |
| DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | 6 | 16 | | | 1 | 2 | 2 | 1 |
| HYDROGEOLOGICAL INSTABILITY | | 9 | | | 1 | 6 | 3 | 2 |
| PO RIVER HYDROGRAPHIC DISTRICT | 1 | 6 | 1 | 2 | 1 | 2 | | 1 |
| URBAN SETTLEMENTS | | 2 | 4 | 5 | | | | |
| WATER RESOURCES | 7 | 12 | | 1 | 7 | 11 | 3 | 6 |
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | 1 | 9 | | | 7 | 10 | | 1 |
| ALPINE AREA AND APENNINES | 6 | 19 | | | | 1 | | |
| ENERGY | | | | | | | | 2 |
| Total | 26 | 86 | 5 | 8 | 19 | 37 | 8 | 19 |

Therefore, CLIMAX PO responds significantly to long-term needs and, regardless of the deadline and the reference sectors, only 63 action proposals are not yet reflected in the project actions and/or complementary measures. However, in most of these cases (ca. 75%) the strategy is however already partially or totally supported by existing plans or tools.

| No Project or complementary action | | |
|---|---------------------|------------------|
| Sector | Nr. Action Proposal | Nr. Plan or Tool |
| COASTAL AREAS | 1 | 1 |
| DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | 5 | 4 |
| HYDROGEOLOGICAL INSTABILITY | 2 | 1 |

| | | |
|---|-----------|-----------|
| INLAND AND TRANSITIONS WATER ECOSYSTEMS | 10 | 5 |
| PO RIVER HYDROGRAPHIC DISTRICT | 6 | 3 |
| URBAN SETTLEMENTS | 13 | 13 |
| WATER RESOURCES | 24 | 18 |
| ALPINE AREA AND APENNINES | 2 | 1 |
| Total | 63 | 46 |

2.2 Sustainability and exploitation of project results (n/a for stage 1)

Sustainability and exploitation of project results (n/a for stage 1)

Describe your strategy to sustain and exploit the project's results after the EU funding ends. Consider the following aspects:

- How will the sustainability of the project impact be ensured? Which tasks will you carry out during the project to ensure that?
- Which parts of the project should be continued or maintained? How will this be achieved and which resources will be necessary?

Do you foresee other ways of exploiting the project's results, e.g. utilisation in further research, in developing / creating / marketing a product or process, in creating / providing a service, in standardisation activities etc.? Who are the targeted users?

How will you ensure the long term implementation of the targeted plan/strategy/action plan and beyond? Will the staff recruited/trained during the project continue to work on the implementation of the plan/strategy/action plan?

Note: Don't forget to include the activities in the mandatory Work Package for Sustainability, replication, and exploitation of project results.

CLIMAX PO sustainability and exploitation strategy has been embedded, since proposal development, within the strategic creation of a consortium that has the authority and competences to develop, implement and maintain all the important expected results that will be produced.

A Sustainability and Exploitation plan with guidelines to generate exploitable and sustainable results will be developed and shared at the beginning of the project and made part of the consortium capacity building actions in order to keep this approach throughout the project implementation. This is necessary to have all partners working from the very beginning thinking about how to continue after the end of the project and maintain the right approach.

At this stage, the sustainability of the CLIMAX PO action is based on 6 pillars:

1. Consolidating the structure and work of the Multi-level Governance Deal (WP2) and its dedicated task forces
2. Making the Adaptation Observatory (WP2), the Adaptation Platform and the climate risk index (WP3) permanent
3. Consolidating the Stakeholder Boards and the training and capacity building schemes (WP4)
4. Making funding streams earmarked for adaptation permanent at District level (WP2)
5. Facilitating the uptake of technical and methodological guidelines produced by the pilot actions (WP5-6-7-8)
6. Facilitating the uptake of policy recommendations and guidelines into the revision and update of plans, strategies and policies

The Multi-level Governance Deal (MGD) developed in WP2 represents the pulsating heart of the project and its core is made of project partners that are fully committed to work together for the implementation of the NAS. The MGD will be created to stay, with formal commitments, roles and task forces where Regional Administrations and their Environmental Agencies will have a leading role along with ADBPO.

The same Regional Administrations will promote the Stakeholder Boards and will maintain as part of their usual workflow. In some cases, CLIMAX PO will not create a new board but will integrate already existing ones.

Regional partners, along with ADBPO, already have in their mission and usual workflow the management of EU structural and national funds. During the project they will improve their capacity to orient them towards adaptation and this should remain in their daily practices. During project implementation they will actively participate in the planning of the new structural funds programming period (2028-2034) having the chance to further dedicate funding to adaptation in the Po River Basin.

CLIMAX PO is also creating a toolbox of technical instruments that will support the exchange of data and facilitate the work of all the private and public actors in the implementation of climate adaptation and, in doing so, will contribute to the overall of the NAS. This activity will continue after the end of the project as

the Adaptation Observatory and the Adaptation Platform will become part of the work of the MGD, as well as the climate risk index.

The consortium enjoys the presence of relevant research institutions such as UNIBO, POLITO and CMCC: they will contribute to the exploitation of project results as starting point for new research projects. A task force of the MGD is actually dedicated to the recruitment of new sources of funding, including new project proposal to be funded.

CLIMATE PO pilot actions (WP5-6-7-8) are planned to systematically generate technical and methodological guidelines and policy recommendations that will allow the MGD dedicated task forces and the whole consortium to promote a set of newly generated good practices with tested results and good potential for exploitation within the District. The MGD will use the Stakeholder Boards at Regional and District level to promote a bottom-up implementation and collection of expressions of interest from relevant institutions and stakeholders, while a top-down exploitation will be executed with the update of strategies, plans and policies.

In fact, a fundamental part of the sustainability of the project is based on the institutionalisation process of the regular planning activities.

The project will produce exploitable results, but a crucial part will be the integration of good practices and policy recommendations in the update of plans and programmes. For this reason, every vertical WP (5 to 8) will have a task dedicated to guidelines and policy recommendations, while the sustainability strategy (reflected in WP11) foresees a systematic contribution to the update (lead by ADBPO as its institutional role) of the Po River Basin Management Plan, the Flood Risk Management Plan and all other river basin planning tools.

Finally, CLIMAX PO will contribute to the update of the National Adaptation Strategy and, possibly, of the National Adaptation Plan, if and when it will be finally approved and become operative.

Sustainability and Exploitation activities will benefit from the large number of actors and stakeholders engaged in activities and capacity building (WP2 and 4) and the huge number of recipients of communication and dissemination actions (WP10) that will facilitate the creation of a steady network and the outreach to a large critical mass of interested parties.

2.3 Catalytic potential: Replication and upscaling *(n/a for stage 1)*

Catalytic potential: Replication and upscaling *(n/a for stage 1)*

Describe the strategy and tasks to multiply the impact of the project (during implementation or afterwards). How will its main actions and results be replicated elsewhere?

Describe the potential for the results to be replicated in the same or other sectors or places. What factors might favour or limit the replication?

Describe the potential for the results to be up-scaled by public/private actors or through mobilising larger investments or financial resources. What is the coverage and size of the market? Who are the potential users of the results?

Note: Don't forget to include the activities in the mandatory Work Package for Sustainability, replication, and exploitation of project results.

The focus of the replication effort will be on supporting all project activities in generating replicable results, creating the basis for potential exchange and transfer to other Italian and International River basin authorities and stakeholders.

Since the beginning of the project the consortium will develop a replication plan that will be updated throughout the project implementation with the aim to identify the main achievements to replicate at National and Eu level, with common guidelines to do so.

Replication activities will be based on a peer-to-peer approach facilitating the exchange of knowledge and experiences in both directions. Therefore, the consortium will contribute to the sharing of good practices in adaptation and water management, while receiving useful contributions for the project and suggestions.

Replication activities will benefit from the cooperation with the External Advisory Board (WP1), as part of the invited members will be representatives of other Italian and European river basin authorities and they will provide suggestions and comments on how to make CLIMAX PO more replicable and effective in Italy and the EU.

The replication strategy aims at multiplying the effects of the project outside the Po River Basin District, through the transfer and replication of good practices and effective methodologies developed and used by the consortium.

Since the potential recipients of replication actions are river basin managing authorities, the replication strategy foresees a proactive, peer-to-peer exchange approach that will aim also at collecting inputs, suggestions and good practices from the potential beneficiaries of replication activities.

The expected recipients are Italian and European river basin districts.

ADBPO will lead an initial analysis of National and European river basin districts in order to identify at least 3 river basins in Italy and at least 5 river basins in Europe that have similar problems and needs

To make cooperation and exchange more fruitful and effective, the shortlisted river basin authorities will be contacted in order to arrange an exchange of visits, knowledge and strategies.

At this stage, we expect to finally select at least 1 Italian River basin and 2 European River Basins, most likely from central and southern Europe where problems and needs might be similar.

ADBPO will organise a visit to the selected River Basin Authorities which will then be invited to visit the Po River Basin.

We expect to organise 3 peer-to-peer exchange visits with each Authority, 1 per project phase, in order to be able to receive inputs and comments at each stage of the process and, at the same time, be able to provide contents and results coming from the different moments of implementation of CLIMAX PO.

At this stage, the main foreseen objects of replication are:

- A consolidated governance structure tested via the Multi-level Governance Deal and its dedicated task forces (WP2)
- An operative Adaptation Observatory (WP2) and Adaptation Platform and Climate Risk Index (WP3)
- The experience of Stakeholder Boards and shared training and capacity building schemes (WP4)
- Embedding funding streams earmarked for adaptation to ordinary planning and management duties at District level (WP2)
- Technical and methodological guidelines produced by the pilot actions (WP5-6-7-8)
- Policy recommendations and guidelines for the revision and update of plans, strategies and policies.

Besides peer-to-peer exchanges, the replication potential of CLIMAX PO will be fostered via dissemination and exploitation actions and the active participation of ADBPO in thematic Italian and EU working groups of River Basin Authorities.

At this stage, **letters of support have already been collected from 2 Portuguese and 1 Hungarian River Basin Authorities.**

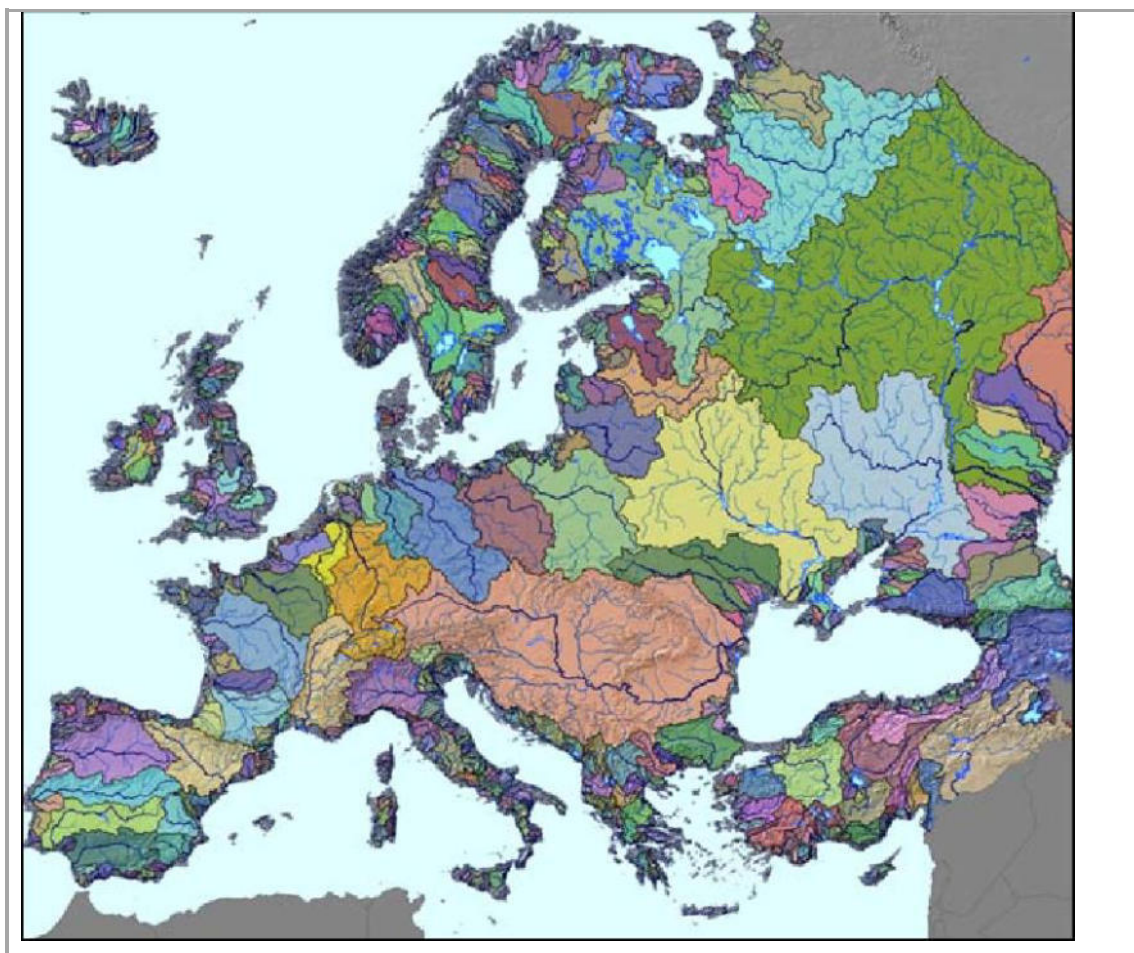
The potential for replication in Italy is significant:

- 6 National River basin authorities
- 13 Interregional River basin authorities
- 17 Regional River basin authorities

The potential for replication in Europe is huge (including 150 transboundary rivers), nevertheless CLIMAX PO will focus mainly on:

- Iberian River basins
- Balkans River basins
- Central European Highlands and Plains River basins
- The Rhône River Basin
- The Danube and its 11 major tributaries

The image below shows the major rivers and river basins in Europe:



3. IMPLEMENTATION

Fill in **only** sections 3.1 – 3.2 at stage 1. Fill in **all sections** at stage 2.

3.1. Work plan

Work plan

Provide a brief description of the overall structure of the work plan, together with a graphical presentation of the components showing how they inter-relate (Pert chart or similar).

Consider dividing your project into **phases**, each one lasting at least 3 years (strongly recommended to reduce the administrative burden). Remember that project monitoring and interim payments are linked to completed phases of the project.

Present the work done by phase. The reader should get a general idea of the chronology of work packages and their main activities.

A work package (WP) means a major sub-division of the project. The number of work packages should be proportionate to the scale and complexity of the project. WP1 should cover the project management and coordination activities. WP2 (and further WPs) should be used for the other project activities. You can foresee as many work packages as needed.

The work packages should be designed in a way to follow the progress in the implementation of the targeted plan/strategy/action plan (biunivocal linkages as far as possible between work packages and plan/strategy/action plan components/pillars).

Fill in the the Implementation overview for the targeted plan/strategy/action plan (annex). You may adapt the table, as long as it gives the overall picture on how the plan/strategy/action plan will be implemented.

The project aims at supporting the implementation of the Italian National Adaptation Strategy with specific focus on the soft and hard measures specifically foreseen for the PO River basin district and also those that are applicable to and have an impact on the river basin.

All actions foreseen are aimed to accomplish project specific objectives and expected impacts, while addressing the identified climate adaptation gaps (governance, knowledge and capacity gaps – see chapter 1 above).

The consortium has structured the project work plan in **11 work packages** different in nature, with more and less technical content and at different levels of implementation (focal areas, river basin district, national, international) in order to ensure an effective reaching of the project specific objectives.

Activities will last 9 years, and they will be divided in 3 phases lasting 3 years each.

The actions foreseen respond to actual climate related threats and adaptation demand identified in the Italian NAS and include the promotion of and creation of a Multilevel Governance Deal (MGD in WP2), in the first phase of the project, with dedicated task forces and with a role of strategic supervision and guidance, explicitly encouraged by the NAS. For the whole duration of the project, a continuous analysis of coherence will be carried out between project activities, complementary funding and any need for update/reform of the EU/national/regional climate, water and environmental policies, plans and regulations.

Horizontal activities include:

- Project Management (WP1)
- Monitoring and Evaluation of project implementation and impacts, including monitoring of complementary actions and policy recommendations (WP9)
- Communication, Dissemination and Networking (WP10)
- Sustainability, Replication and Exploitation (WP11)

Horizontal activities foresee an initial internal organisation in terms of tools and planning that will take place in the first year. Then, they will continue throughout the implementation of the 3 project phases.

Technical project Activities are designed at river basin district (*District-level actions*) and at local hot-spots scale (*Focal area-level Actions*).

District-level Actions are covered by Work Packages 2 to 4 and address the project specific objectives 1-3 (SO1 to 3 and 5) related to:

- Governance of climate adaptation activities through participation and stakeholder engagement (SO1 – WP2 and WP4)
- Coordination of funding for climate adaptation (SO1 – WP2)
- Knowledge production and management and data sharing (SO2 – WP3)
- Building capacities and awareness to face climate change related threats (SO3 – WP4)
- Institutionalisation of climate adaptation at Po River Basin District level (SO5 – WP2 in synergy with WP11)

WP2 Multilevel Governance and Coordination of funding focuses on the analysis and reorganization of political governance processes and territorial processes at District level promoted through a Multilevel Governance Deal (MGD) and its dedicated task forces focused on the coordination of the key stakeholders and complementary (and other) funds necessary to implement the NAS.

This WP also focuses on institutionalisation of project activities and results, in synergy with WP11 activities on sustainability and replication.

By the end of Phase 1 the WP will deliver an operative MGD, an Adaptation Observatory and will start coordinating complementary funds. It will also initiate the task on development of policy recommendations.

WP3 Technical and Methodological approach focuses on the acquisition of information and preparation and development of tools useful for the technical implementation of the project.

By the end of Phase 1 the WP will deliver a Report on the developed Climatic risk index at sub-basin scale with indicators of risk, exposures and vulnerabilities. It will also deliver a beta version of a comprehensive climate data platform foreseen by the NAS and focused on scenarios, profiles and climate services for the Po River Basin district.

WP4 Stakeholders Engagement and Capacity Building focuses on local and district-level stakeholder engagement for collecting initial information about the maturity level of the stakeholders and of the district territory and data for the governance of technical, political and funding issues.

Then the WP will focus on capacity building referring to the implementation of the NAS at different levels (national, regional, local, consortium), with a dedicated focus on local governments (metropolitan and diffuse urban centres) as fundamental actors in climate adaptation, under the umbrella of the Covenant of Mayors.

By the end of Phase 1 the WP will deliver the data and the information necessary for WP2 and WP3 and will have started the capacity building process at consortium and district level).

Focal area-level actions are covered by Work Packages 5 to 8 and they are designed to address specific objective 4 (SO4 – Improving water security and climate resilience) and address significant and urgent climate related-risks and impacts foreseen by the NAS. Based on these good practices, the consortium will elaborate case studies and examples replicable in other places within and outside the Po River Basin district. They are tangible measures focusing on the local hot-spot areas of climate vulnerability and risks, identified as such by the Italian NAS and implemented by multidisciplinary working groups lead by the responsible project beneficiaries in collaboration with local actors and stakeholders.

Each WP will have a task dedicated to transform all the technical work in **guidelines and policy recommendations** providing contents and inputs for the **institutionalisation** process, including the update of existing plans and the **replication** of measures within and outside the Po River Basin district.

Work Packages 5 – Water Management focuses on 2 very important issues:

- Water storage capacity and management by means of regulated alpine lakes, artificial reservoirs and water detention ponds, and pondering multiple purposes (e.g., water abstraction, flood defence, biodiversity and habitat, water quality management) and environmental protection's needs.
- Operational procedures, cost-benefit/effectiveness analysis, stress tests, multi-purpose management, environmental retrofitting of engineered structures such as dams and levees to improve the sustainable management of sediments and preserve downstream water quality.

Work Package 6 – Nature and Ecosystem-based Solutions focuses on nature/ecosystem-based solutions to flood risk and connectivity of green infrastructures through peripheral woodland and fluvial buffer strips and mainstreaming green adaptation in the **Perifluvial Vegetation Management Plans**, following an **Integrated Risk Management Approach**. The updated plans will respond to more intense meteorological and hydrological risk drivers, altered climatic and environmental conditions which affect ecological communities, considering land use changes.

Then the WP focuses on an emblematic intervention for adaptation to climate change, called “Wild Lambro” river. This pilot action increases the space available for the Northern Lambro River through the **restoration of the longitudinal and transverse continuity of the watercourse** from Monza to Melegnano (Province of Milano); it increases the adaptation capacities to climate change in the south-east area of Milan, the morphological and ecological improvement of the Northern Lambro river through the **riparian vegetation restoration**, and finally the possibility of use by the citizens of a large portion of the territory, while contributing to the reduction of the hydraulic-morphological risk.

Work Package 7 – Defence and Water Infrastructure focuses on defence and water infrastructure and is aimed at showcasing good practice examples adapted on specific areas of the District. Such actions primarily refer to address the NAS thematic area related to deal with “the increased extreme convective precipitation events and ensuing floods and other hazards”.

WP is structured in 2 main actions.

Risk planning and real-time management of critical events generated by storms in small basins and urban and peri-urban areas of the cities across the Po River Basin. The task has the goal to investigate innovative ways to improve rainfall monitoring capabilities, integrating all available information and measures such as rain gauges, radars and estimates obtained from the backhaul layer of the cellular communication network, and to use methodologies and warning tools in an integrated way to extend as much as possible the risk perception ahead of time to reduce fatalities and flood losses as much as possible.

Coastal alert system for extreme water events in the North Adriatic Coast. The task will integrate the components of the observation and forecasting systems into the existing operational modelling systems available and will therefore make available the results to the Civil Protection and the competent regional offices (all involved as Regions are partners or have sent letters of support). The additions of the existing forecasting systems with the new model implementations will improve the prediction of extreme events such as the intrusion of the saline wedge into the Po branches and the coastal floods caused by the combination of the river supply, storms, and coastal storms.

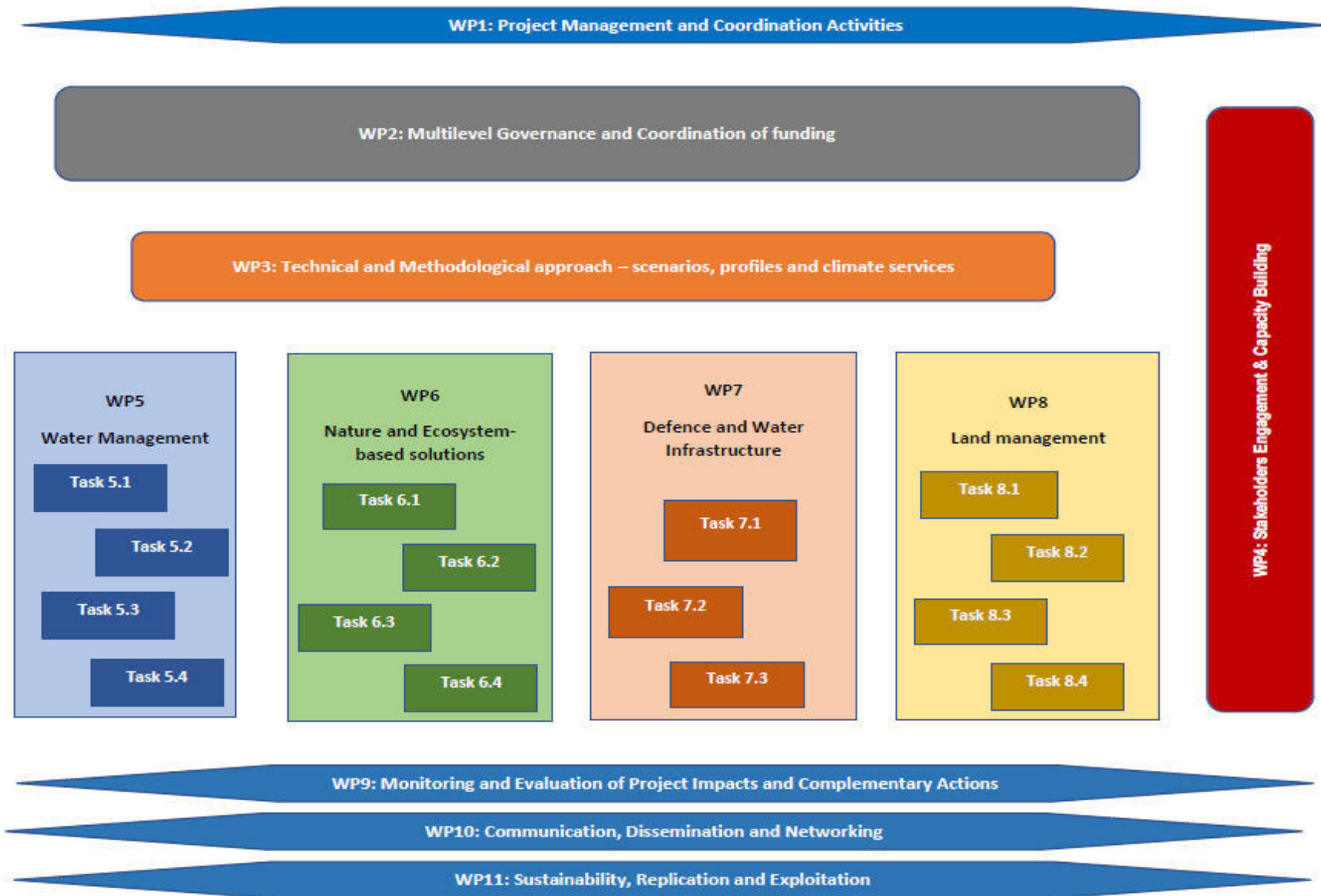
Work Package 8 – Land Management addresses lowlands - in many cases former floodplains - and impacts of climate change on irrigated agriculture and conservative water and soil management.

The WP aims at integrating water governance and irrigation with soil management to enhance agroecosystems resilience and adaptive capabilities. The proposed tasks are effectively complementing activities carried out in the Po River Basin, in Italy and in similar areas in EU, in the last decades. Achievements obtained by RDPs, EU, National and Private projects can be magnified integrating the CLIMAX Po results in the everyday governance and irrigation practices. All the action can be transferred over open canals networks and irrigation systems in Italy and in Europe. As a matter of fact, each of them is paradigmatic of a necessary step forward toward an adaptive and sustainable resource governance.

Therefore, the WP promotes the adoption of climate-smart and extensive farming practices, designed with the Land Reclamation and Irrigation Boards.

Then, it focuses on Land Degradation Neutrality methodology applicable by local territorial bodies to ensure soil protection.

The following diagram summarizes the structure of the work plan and the interaction of the different WPs.



3.2 Stakeholder input

Stakeholder input

Identify any key stakeholders outside the consortium that are required to ensure the success of the project. How will you mobilise them to contribute to your project activities or participate in these?

Annex Letters of support to demonstrate the type and level of commitment already secured (if any).

The project involves 20 partners among authorities, agencies, bodies and administrations at different levels. In addition to the direct beneficiaries, efforts were made to involve numerous stakeholders in order to increase the resonance of the effects of the project, increasing the synergy between the different actions and promoting cooperation between the various actors present on the vast territory of the district.

The creation of a network of connections based on the different stakeholders will lead to a better overall implementation of the NAS.

NATIONAL INSTITUTIONAL STAKEHOLDERS

Being matters developed at national level, the consortium has involved as direct stakeholders the following National institutions, according to their role: the Ministry of Ecologic Transition (MiTE), the Ministry of Infrastructure and Sustainable Mobility (MIT), the Ministry of Agricultural, Food and Forestry Policies (MIPAAF), the Ministry of Economic Development (MISE), the Ministry of Economy and Finance (MiEF) and the Higher Institute for Environmental Protection and Research (ISPRA) and the National Civil Protection Agency.

Their participation is guaranteed by the fact that the project coordinator Po River Basin District Authority (ADBPO) is governed by the Conferenza Istituzionale Permanente (Permanent Institutional Conference), a decision-making body chaired directly by the Minister for Ecologic Transition and participated by the National Civil Protection Agency, the Presidents of the Regions located in the river basin district and by the relevant other Ministries.

In addition, in relation to the common institutional objectives, the other District Basin Authorities present in the Italian territory were also involved: District Basin Authority of the Northern Apennines, the District Basin Authority of the Central Apennines, the District Basin Authority of the Eastern Alps, District Authority of the Southern Apennines, the Basin Authority of the Hydrographic District of Sicily, Regional Basin Authority of Sardinia.

As to national funding for climate adaptation, a relevant National institutional stakeholder is CIPRESS (former CIPE), the Inter-ministerial Committee for Economic Planning and Sustainable Development which prepares the guidelines for the national economic policy and it indicates, following indications from the Ministry of Budget and Economic Planning, the general guidelines for the preparation of the national economic program.

In general, national institutional stakeholders are important for governance actions, as well as for technical implementation and coordination of funding.

REGIONAL and LOCAL INSTITUTIONAL STAKEHOLDERS

The three main Regions involved in the Po Rivers Basin District (Piemonte, Lombardia, Emilia-Romagna) participate in the project as direct beneficiaries and, in some cases, with their regional environmental agencies and their reclamation agencies.

Nevertheless, it is important to engage as stakeholders also the other regions affected by the Po River Basin, that is Liguria, Marche, Toscana, Valle d'Aosta and the Autonomous Province of Trento in order to enlarge the participation and manage climate change issues in a homogeneous way.

Municipalities, Mountain Communities, Provinces and Metropolitan city areas are also involved as stakeholders and will be invited to meetings and conferences of the project, resulting as they are the management authority of the territory and main actors in defining management and development strategies. It has also been assessed the possibility of impacts / effects occurring in their territories following the implementation of actions.

Regional and local institutional stakeholders are important for governance actions, as well as for technical implementation and coordination of funding.

The implementation of the project foresees preparatory actions (in WP2, WP3) relating to the definition of the possible organisations and target groups that are involved/affected by the project activities and which have not been involved in the drafting of this proposal.

They are, mainly:

NATIONAL, REGIONAL and LOCAL STAKEHOLDERS

Representatives of civil society will be invited whenever consultation and direct participation in actions will be necessary through their national organisation or regional/local branches, such as:

- professional orders of Agronomists, of Agrotechnicians, Lawyers, Biologists, Chemists, Geologists, Geomorphologists and Engineers, and groups of experts such as GRAL Alluvioni Group, CISBA (Italian Center for Biological Studies) and CIRF (Italian Center for River Restoration)
- local and regional associations (environmentalists, fishermen, local culture, ...)
- users of water resources (hydroelectric, drinking water, ...)
- WWF, Lipu, FEDER GEV, GRAL, Greenpeace, Italia Nostra ONLUS
- trade associations (farmers, industrials, craftsmen)
- environmental and technical agencies

Local and Regional banks and their foundations will also be engaged as potential co-funders of adaptation measures.

Stakeholder involvement is envisaged in many of the concrete actions in order to expand the possibilities of achieving the results set in the individual actions and objectives of the project as a whole.

WP2 Multilevel Governance and Coordination of Funds foresees the involvement as stakeholders of the Regions whose territories are included in the District (as delegates or observers), in order to create a coordination of national, regional and local strategies and plans, as well as a series of shared and complementary choices between the various levels of governance. This will lead to the “Multilevel Governance Deal” (MGD) that will define and manage the district governance.

Other district actions (WP2 to 4) and focal area-level actions (WP5 to 8) provide the direct participation of stakeholders experts on different issues; see for example the necessary participation of experts in the preparation, development and release of the Platform which will make homogeneous and available data and information relating to atmospheric variables (WP3), the collaboration in the definition of significant forms of restitution of the data that will be obtained from the simulations for the estimation of the impacts of the climate changes (WP5) and the consultation during the design and realization phase of works on the territories (WP8). In particular, for those activities that envisage identifying an optimal water resource management (WP5) it is considered necessary to involve the subjects who may be directly or indirectly interested in this activity: for agricultural sector CRPA, CRPV, Confagricoltura, Veneto Agriculture; for the hydroelectric sector Elettricità Futura, Enel, A2A, Terna; for the drinking water sector Utilitalia, the Integrated water service of the Metropolitan City of Milan, the Emilia-Romagna Territorial Agency for water and waste services as well as the reclamation and water consortia present in the area. The engagement of relevant stakeholders will be aimed at both stimulating technical discussions and at collecting and reporting data about critical water scarcity events occurred in the past years and in particular in the 2022 drought.

The stakeholders, relevant at local and district level, will be involved through periodic meetings managed by the regional/district beneficiaries of the project, which will institute, or will use where already existing, regional and district **Stakeholder Boards (see WP4)**. The link among the regional stakeholders will be ensured through the project meetings where the beneficiaries will be asked to explain their effective involvement.

The Stakeholder Boards will be called at the beginning of the project and periodically during the project implementation (at least once a year). The regional and district administrations will guarantee the maintenance of the Stakeholder boards also after the conclusion of the project, so as to ensure the involvement of key stakeholders in the implementation and update of the National Adaptation Strategy at District level. At least one Report for each Region about the involvement of stakeholders in the implementation of NAS will be realized at the end of WP4, possibly containing proposals for a better involvement in further activities.

The Stakeholders Boards will meet periodically according to local and project needs and in some cases will be fundamental to the implementation of focal area-level actions such as in WP8 and the development of networking activities with the local stakeholders and project partners (WP10).

For this reason, the involvement of stakeholders in the implementation of the project is also fundamental for monitoring actions.

Raising awareness and ensuring the adoption of the results, measures, and guidelines of the project by the wider community of stakeholders are key project objectives (WP2 and WP9), as well as defining the

effectiveness of the project actions by assessing the impact and creation of socio-economic value produced through the involvement of stakeholders and communities in which the project is tested and implemented (WP9).

To increase the resonance of the project and the awareness of the populations, as well as to ensure a wide dissemination of the project at national and international level, communication and dissemination actions are fundamental. The project results promotion and dissemination will take place thanks to a wide publicity through various means: web channel, information materials and conventional events. The direct involvement of all the identified stakeholders, the contents, methods and proposals to be followed in the organization of events and training activities will be defined in WP10.

The creation of a network of training agencies, training and capacity building networks operated by different stakeholders, and educational institutions of different levels and degrees, will allow to define the contents that will be used to carry out school, academic and professional education and training activities (WP4 and WP10).

All interested parties will be asked to contribute to the activities through thematic seminars, working groups or direct hearings. Their involvement will be essential for the collection of data and the comparison of experiences to define guidelines, e-learning modules, and manuals.

INTERNATIONAL AND NATIONAL REPLICATION STAKEHOLDERS

The project foresees the replication and exploitation of knowledge and good practices produced to other areas of the Po District and in other River Basin Districts in Italy and abroad with a peer-to-peer approach (WP11).

As to replication and exploitation in the Po River basin district, all stakeholders will already be engaged in follow-up activities.

As to replication and exploitation outside the Po River basin district, representatives of other Italian river basin districts will be engaged, and the consortium will participate in National thematic working groups (i.e., The National Working Group of all Permanent Observatories on Water Use, representing all river basin districts) to engage them for potential replication activities.

Consortium members (i.e., ADBPO) also participate in International working groups where other Authorities managing river basins are present (i.e., The International Sava River Basin Commission). They will be engaged in networking activities with a view on replication.

At this stage, 21 stakeholders (18 Italian actors and 3 international River Basin Authorities), included in the categories above, have expressed their interest in the project activities:

The following tables summarizes the letters of support received at this stage:

| Nat. | Name of the Organisation | Role | Potential Contribution to CLIMAX PO |
|--|---|--|--|
| National Institutional Stakeholders | | | |
| IT | ISPRA | ISPRA, environmental and research institute, acts under the vigilance and policy guidance of Italian Ministry for Ecological Transition (MiTE) | Key role in the Multi-level Governance approach and support to financing adaptation measures |
| IT | CREA-PB: Council for Research in Agriculture and the analysis of the agricultural economy -Research Centre for Agricultural Policies and Bioeconomy | Italian public research and experimentation institution monitored by the Italian Ministry of Agricultural, Food and Forestry Policies (MiPAAF) | Key role in the Multi-level Governance approach and support to financing adaptation measures |
| Regional and Local Institutional Stakeholders | | | |
| IT | Tuscany Region– Directorate for land defence and Civil Protection | Italian Regional Authority responsible for the Po River Basin management (limited geographical coverage) | Participation in transnational Multi-level governance. Provide their support in particular of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation. |
| IT | Liguria Region – Environmental and Civil Protection Department | Italian Regional Authority responsible for the Po River Basin management (limited geographical coverage) | Participation in transnational Multi-level governance. Potential recipient of inputs for Regional Adaptation Planning and Water Management |
| IT | Autonomous Province of Trento – Dipartimento Territorio e Trasporti, ambiente, energia, cooperazione (DTTAEC) | Italian Autonomous Province responsible for the Po river basin management (limited geographical coverage) | PAT would like to be actively involved in the project activities, mainly in WP2 ("Multilevel governance and coordination of funding") and WP3 ("Technical and methodological approach"), which correspond to two of the most relevant priorities included in the National Climate Adaptation Strategy for the area of the hydrological Po basin. |
| IT | Valle d'Aosta Regional Administration Department of Planning, Water Resources and Territory (DPWRT) | Italian Autonomous Region responsible for the Po River Basin management (very limited geographical coverage) | Participation in transnational Multi-level governance. Provide their support in particular of national and transnational governance, the promotion of climate change adaptation |

| | | | |
|--|--|--|--|
| | | | actions and improvement of the nature conservation. |
| IT | Azienda Speciale Ufficio di Ambito della Provincia di Mantova (ATO Mantova) | Territorial body on a local scale | Involved in the different phases of the project, in sharing the results |
| IT | Regional Agency for Environment Protection of Valle d'Aosta (ARPAVDA) | Environmental Agency on Regional scale | Involved in the different phases of the project, in sharing the results |
| National, Regional and Local Stakeholders | | | |
| IT | Consorzio del Ticino | Lake regulator body Non-economic public body | It is one of the lake regulators bodies, whose contribution is essential for the correct management of WP5 |
| IT | Consorzio dell'Adda | Lake regulator body Non-economic public body | Involved in the different phases of the project, in sharing the results |
| IT | Consorzio dell'Oglio | Lake regulator body Non-economic public body | Involved in the different phases of the project, in sharing the results |
| IT | ORDINE DEI GEOLOGI DELL'EMILIA-ROMAGNA (OGER) | Geology regional professional association - Private regional law body made up of professionals | Involved in the different phases of the project, in sharing the results |
| IT | ORDINE DEI GEOLOGI DEL VENETO | Geology regional professional association – Private regional law body made up of professionals | Involved in the different phases of the project, in sharing the results |
| IT | Consulta Regionale degli Ordini Ingegneri della Lombardia (CROIL) | Engineers regional professional association - private regional law body made up of professionals | Involved in the different phases of the project, in sharing the results |
| IT | Università degli Studi di Parma (UNIPR) | University - Research Institution | Involved in the different phases of the project, in sharing the results |
| IT | Associazione Nazionale Comuni d'Italia - Lombardia (ANCI Lombardia) | National Association of local authorities (Regional branch) | Involved in the different phases of the project, in sharing the results |
| IT | Municipality of Milan (CdM) | Italian Municipality in charge of urban and sustainable policies within the communal area | Involved in the different phases of the project, in sharing the results |
| IT | ONB Ordine Nazionale Biologi - CNBA Coordinamento Nazionale Biologi Ambientali | Biology national professional association – national private law body made up of professionals | Involved in the different phases of the project, in sharing the results |
| Replication Stakeholders (National and International) | | | |
| HU | North-Transdanubian Water Directorate | Hungarian River Basin Authority | Replication of CLIMAX PO approach and/or methodologies in a different country and River Basin |

| | | | |
|----|---|----------------------------------|---|
| PT | Tagus and West River Basin District Administration from the Portuguese Environment Agency (APA/ARHTO) | Portuguese River Basin Authority | Replication of CLIMAX PO approach and/or methodologies in a different country and River Basin |
| PT | Alentejo River Basin District Administration (APA/ARH Alentejo) | Portuguese River Basin Authority | Replication of CLIMAX PO approach and/or methodologies in a different country and River Basin |

3.4 Impact monitoring and evaluation (n/a for stage 1)

Impact monitoring and evaluation strategy (n/a for stage 1)

Describe your overall approach to monitor and evaluate the impact indicators during your project. Ensure that you include specific tasks to monitor, evaluate and report impacts in the work plan.

The WP9 of the LIFE CLIMAX PO project will be fully dedicated to Monitoring and Evaluation.

In the evaluation process will be focus on three relevant aspects:

- coherence and effect on SNA Implementation;
- socio-economic impact assessment;
- KPI control and upload in the webtool.

Monitoring on climate indicators (climate KPIs) of the LIFE CLIMAX PO Project

A report on the progress of the activities with respect to the objectives will be drawn up every year. The performance indicators for monitoring will be in terms of activities concluded in the phase reporting period, for all project phases. The specific indicators will cover all areas of the project from the implementation of actions to dissemination (e.g., newsletters, events, publications, number of people informed) and market uptake (new businesses created as project result).

For the definition of basic scenarios (current weather conditions) for each climatic zone of the area affected by CLIMAX PO, where possible, high resolution observational data sets will be used. Expert judgment will be provided on signal strength and reliability for each climate parameter. Standardized data formats will be established for current and future climate. The parameters needed to assess the influences on the hydrological basins may differ from area to area and include precipitation, temperature and derived indices, periods of drought, wind and snow and will be made available as daily or seasonal data. Output of this activity is an assessment of the baseline scenarios for all areas with climate inhomogeneity. Specific attention will be given to monitoring the indicators to measure the impacts generated by each action as well as the overall impacts of the project. Given the complexity of the area in terms of ecosystems, biodiversity and land use, a fine structure of indicators will be identified for each macro-area. To articulate the definition of macro-indicators, the monitoring activity involves the implementation of campaigns of measures aimed at quantifying variables if they are not present in the state of knowledge. Once the baseline is evaluated, the performance indicators will be updated annually. This framework will be included in a SWOT analysis that will be also evaluated annually. The complex system of indicators is further enriched by communication and visibility indicators. The project already has communication actions that will be adequately coordinated in an organic structure to facilitate the integration of all components in the final project.

Raising awareness and ensuring further adoption of project results, measures and guidelines by the wider community of stakeholders are key objectives of the CLIMAX PO consortium. To achieve these goals and ensure that the impact is maximized, the CLIMAX PO partners have defined a tailored approach that is based on the following three complementary and synergistic strategies:

- A dissemination and communication strategy to optimize the transfer of knowledge and results generated to the stakeholder community and beyond, and to transmit the potential of CLIMAX PO;
- An engagement strategy to engage relevant stakeholders with CLIMAX PO activities;
- An exploitation strategy to ensure impact realization and support market adoption and replication of CLIMAX PO best practices, guidelines and other results.

The approach will be shared by all key partners across all major WP leaders both in Europe and abroad and will contain measures to be implemented both during and after the project to address a full range of potential users and uses of solutions to mitigate the impact of climate change. This approach defines the main CLIMAX PO outputs and the target audience together with operational details on how they will be produced and/or addressed and will be a binding guide, for the actors involved in the work packages, on how to make the results better available to all interested parties. For the implementation and continuous updating of the strategy, all partners will be involved: all dissemination and involvement activities of relevant stakeholders will come together and bridges will be built between the work packages. This high-level binding framework would maintain consistency while offering the flexibility to take actions based on the actual needs identified during the project.

As mentioned above, the monitoring strategy is multi-stage as summarized in the table below:

| Timing | Dissemination | Engagement | Exploitation and market uptake |
|----------|--|--|--|
| M1-M36 | Website Visual identity Promotional material Press releases | Stakeholder consultation Implementation of major international frameworks | Initial exploitation plan |
| M37-M84 | Newsletters Website update Press releases Website update Publication of reports and articles Scientific publications Presentations at events | Capacity building Education & training | Validation of interim results Market potential analysis Definition of exploitable results Exploitation workshops Business modelling |
| M85-M108 | Publication of reports and articles Scientific publications Website update Presentations at events Final project conference Final D&C plan | Education & training | Validation of final results Final exploitation plan Policy briefs Guidelines Replication packages Follow-up financing; Business modelling |

The monitoring, reporting and evaluation (MRE) scheme adopted for this project will track the progress made, evaluate what has been achieved and communicate the adaptation processes and results. The overall goal, however, is to enable "new information and lessons learned to shape future decisions" (SEE, 2015) within a policy cycle of iterative adaptation. MRE schemes have progressed in recent years and the Italian PAN embraces a series of designed and operational indicators. MRE indicators will provide feedback on adaptation progress and performance, i.e., whether the goals, target and adaptation efforts are sufficient and how they contribute to reducing vulnerability to climate change. During the implementation of the project, the indicators will also help to improve existing knowledge on the expected and observed impacts and vulnerabilities of climate change and/or identify key challenges, opportunities and persistent knowledge gaps. The following types will be distinguished:

- i) the input / output indicators capture resources intended for the implementation of adaptation actions (e.g., financial resources mobilized for complementary actions) and direct results of these actions, such as the number of seminars for the development of skills or people who benefit from the professional training;
- ii) process indicators describe the process steps that can realistically be expected to contribute to the success of climate adaptation, such as the level of progress towards the compilation of urban / regional adaptation plans triggered by this project or the establishment of committees of planning;
- iii) the result indicators are directly linked to the CLIMAX PO objectives, including levels of reducing vulnerability, improving resilience or greater water security. While based on the NAP indicators, the same indicators (input / output, process, result) will be refined and integrated in order to be specified for the objective and action of each project.

Identification of soil functionality indicators and definition of the survey plan

The activity refers to the SNAC National Strategy and in particular to the measures envisaged in the Agriculture and Food Production sector (from page 158 of the SNAC) and will be carried out by ERSAF. The focus is on evaluating the effects of conservative management practices of transferable soils within the decision-making processes, also through modeling simulations, able to analyze the effects of the management practices of soils or their change in the presence of future climate scenarios. The activity aims at selecting the set of indicators through which to measure the agronomic and environmental performance of conservation practices and at defining the methodology and the survey and planning support plan that will be implemented in the concrete actions. The activity will include the creation of the databases necessary for the population of the selected indicators and for the updating of the information collected over time and for the modeling of the indicators in future periods of interest for the decision-making system. The activity will be carried out in close collaboration between the partners and making use of the scientific support of the university and / or other technical-scientific subjects with specific skills in terms of conservation agriculture, ecosystem services generated by the soil resource and adaptation to climate change in the agricultural sector, with particular reference to the management of water and irrigation resources. The identification of the indicators will be carried out through the analysis of the existing technical-scientific bibliography, paying attention also to the types of data available in the regional, basin and national databases, useful for forming the minimum data set required by the models that will be used for the evaluation of the effects of conservation practices. In selecting the indicators, the results of the projects and surveys already carried out in the Po Basin area will be taken into consideration.

Achievement of neutrality targets in terms of Land Degradation Neutrality

The sub action, coordinated by ERSAF with the participation of AdBPo, is an activity specification dedicated to the implementation of the third phase that distinguishes the LDN methodology proposed in action C14, aimed, on the basis of the specific indicators specifically identified in the previous phases, to verify the level of achievement of "neutrality". The activity refers to the SNAC National Strategy and in particular to the measures envisaged in the Desertification, land degradation and drought sector (from page 146).

It is developed in: a) the analysis of the baseline relating to the level of LDN in the hydrographic sub-basin chosen defined in the initial phase of the project A2.3); b) the collection and systematization of the elements of knowledge acquired in the phase of use of the methodology to support the territorial planning and design processes (action C14); c) the acquisition of data on changes in the use of the territory that have occurred subsequently the definition of the baseline and changes in the indicators adopted for the evaluation of the LDN. For the latter purpose, a second survey of the environmental and soil parameters needed to populate the indicators. This will be followed by the mapping of the level of degradation of the territory considered at the end of the project (time $t + 1$) and the evaluation of the neutrality targets of degradation of the soil resource reached in the time interval considered (5 years). In any case, this assessment will be based on "indicators of global scale" (land use change, land productivity and carbon stock in soils and stands), to allow comparison with other applications of the LDN methodology in areas different or at different scales, to which will be added the "local scale indicators" capable of intercepting the specificities and climatic-environmental emergencies of the sub-basin subject to the actions, identified through the participatory process of stakeholder involvement. This will therefore allow the verification that the state, both in quantitative and qualitative terms, of the territorial resources necessary to guarantee the ecosystem functions and services generated by natural capital and to ensure the production of food and foods, has remained stable or, possibly, has increased. within the established temporal and spatial scale.

The activity will also be completed by an analysis of the validity of the model developed and by the organization of two workshops, one at a local level and the other at the Po basin scale, aimed at examining the potential and conditions for the replicability of the analysis methodology. of the LDN to support decision-making processes for governing the territory in other areal contexts and for its consequent transformation into a guiding directive whose application can be extended to the entire river basin.

Monitoring in terms of contribution to risk reduction, but also other aspects concerning ecological conditions and ecosystem services.

For the monitoring of risk reduction, ecological conditions and ecosystem services, 4 indicators will be used:

- 1- Space for fluvial dynamics: surface available for fluvial dynamics and flooding for ordinary floods. This surface will be measured on the basis of aerial images of suitable resolution before the intervention and one year after the completion of the intervention;
- 2 - Hydraulic benefit: additional volume intended for controlled rolling / flooding compared to the conditions prior to the intervention (in m^3). The largest volume available during floods will be calculated and compared with the situation prior to the intervention;
- 3 - Ecological functionality: used as an indicator of ecological functionality, it makes it possible to attribute a judgment on the ecological functionality (and implicitly on the quality) of the river corridor (riverbed and perfluvial bands / alluvial plains). The index is detected on homogeneous stretches of watercourse, on both banks. The survey will employ the use of the IFF survey card. The metadata required concern the basin, the watercourse, the locality, the width of the soft bed, the length of the homogeneous section in question,

the average altitude of the section, the date of the survey, the number of the file, the number of the photo and the code of the homogeneous line. The IFF will be detected along the entire stretch affected by the intervention, and the survey will be carried out before the intervention and after the intervention, at least one year after the end of the works in order to highlight the differences before and after the intervention (in the first phase and in the last phase of the project).

4 - Opportunities for use: by administering questionnaires to citizens who frequent the stretch of river affected by the interventions. Six months after the end of the works, a sample of at least 100 citizens will be interviewed, through which we will try to estimate the number of people who habitually frequent the area. Since the area is not frequented today, it will not be possible to administer the questionnaire before the intervention.

The first three indicators will be detected both before and after the intervention, the fourth will be detected only six months after the end of the works.

The monitoring will aim at evaluating in an integrated way the benefits of the new infrastructure built through the BĒST (Benefits Estimation Tool - valuing the benefits of blue-green infrastructure) system for evaluating ecosystem services, developed in England by Environment Agency in partnership with the Association of the Construction Industry for Research and Information (CIRIA). This system allows to evaluate and monetize the ecosystem services provided by the green and blue infrastructures shown in the following table.

| Benefit category | What it covers | Ability* to monetise? | Ecosystem service category |
|------------------------------------|--|-----------------------|-----------------------------|
| Air quality | Impact on health from air pollution | ✓ | Regulating |
| Amenity | Attractiveness and desirability of area | ✓ | Cultural |
| Asset performance | Reduced flows to works and volume to treat from combined systems | ✓ | Provisioning |
| Biodiversity and ecology | Sites of ecological value | ✓ | Supporting |
| Building temperature | Cooling (summer) or insulation (winter) | ✓ | Regulating |
| Carbon reduction and sequestration | Operational (reduced energy use), embodied (reduced water use), sequestration (planting) | ✓ | Regulating |
| Crime | Crimes against property or people | × | Provisioning/ Cultural |
| Economic growth | Business, jobs, productivity | × | Provisioning |
| Education | Enhanced educational opportunities | ✓ | Cultural |
| Enabling development | Headroom for housing/other growth | ✓ | Provisioning |
| Flooding | Damage to property/ people | ✓ | Regulating/ Cultural |
| Health | Physical, emotional, mental health benefits from recreation and aesthetics | ✓ | Cultural |
| Noise | Attenuation of traffic-related noise | ✓ | Cultural |
| Recreation | Involvement in specific recreational activities | ✓ | Cultural |
| Tourism | Attractiveness of tourist sites | × | Provisioning |
| Traffic calming | Risk of road accidents or street-based recreation opportunities | × | Cultural |
| Water quality | Surface water quality improvements to aesthetics, health, biodiversity, etc. | ✓ | Regulating/ Cultural |
| Water quantity | Groundwater recharge, rainwater harvesting and improvements to flow | ✓ | Provisioning/ Regulating |

* Note that BĒST enables the user to enter a lump sum or present value if information becomes available or a detailed study is undertaken for the benefits marked with a cross in this column.

Assessment of the social impact

Measurements of the socio-economic impacts are intended to assess how the benefits of the actions carried out may relate not only to an effective improvement in adaptation to CC through multilevel governance on water management but also:

- Realize a truly integrated project that can bring benefits to the management of water supply in cities by identifying more sustainable lifestyles and more environmentally conscious, as well as a better way of management and management of water resources
- Building and strengthening a political culture based on shared data and multilevel governance to support climate change adaptation *policies* and practices
- Activate procedures to support the integration of fundings (private and public) in implementing NAS activities
- Provide for a plan to involve stakeholders and assess the socio-economic impact of the interventions made, facilitating their maintenance over time (also supporting/reinforcing initiatives with renewed legislation and regulations attentive to the issue of adaptation to CC)
- Ability to up-scale and reproduce interventions over time and space. Monitoring is a way to identify crucial learning points and themes in the topic and improve future activities and innovation.

Constraints and assumptions:

Measuring social impact takes quite a long time and results are not always immediately available or complete during project implementation. Some benefits become visible and measurable sometime after the implementation of the actions and, consequently, data collection may suffer a possible postponement. To overcome this blind spot, both qualitative and quantitative methods will be adopted in the evaluation (data collection but also interviews, focus groups), so that the impact of the project can be gradually drawn with multiple tools that could fully describe the effect of project actions on multiple levels. The approach must, therefore, be dynamic rather than static (and easily adjustable to different circumstances, changing needs, diversity between SH and so on) and must provide for pre- and post-intervention evaluations, to identify the benefits obtained on a broader scale.

Another issue that could be critical is related to the selection of indicators (both in terms of measurability and adaptability to the contexts to be evaluated) for this reason, the working group will proceed through co-design workshops to define the most suitable indicators ensuring that the selected indicators are not too complex, that they are related to the project objectives and that they are shared by all those involved in the implementation of actions.

Assessment of the economic impact

The European Union is developing its development strategies considering the activities related to the environment and sustainability. In fact, investing in the environment and the territory could represent a way to accelerate economic development, to identify new opportunities to qualify the system of local businesses, to innovate the network of advanced services in the area. In the documents and strategies of the European Union and in the scientific literature we can find clear references to the "green new deal" with a focus on the strong role devoted to the improvement of the territorial resources and investments aimed at ensuring the efficiency of infrastructure related to the environment and the green economy.

The economic monitoring activities will be based on the following set of sub-tasks:

- Evaluation of the impacts of green infrastructures and environmental improvements on the territory, with the analysis of the positive effects produced on the basin areas and in the economic production of the reference territorial areas;
- The definition of a set of economic indicators related to sustainable development goals and the creation of a support system for decisions and monitoring of results achieved on these aspects;
- The creation of business models for companies in the green economy sector with particular reference to the activities of nature-based solutions that are possible to associate with green infrastructures and environmental improvements;
- The evaluation of innovative ways of global service management for green infrastructures;
- The impacts of green infrastructures on the transition from technological Smart cities to Smart Sustainable City;

The pilots will be carried out in municipalities and territorial areas of the Metropolitan City of Bologna and they can be useful as a reference for the other territorial areas of the project.

KPIs

With the replacement of the old excel model for KPI used in the previous Life projects with the Online tool integrated with the Participant Portal, the uploading of the KPI baseline and forecast should be automatically managed. In the foreseen reporting steps, the team will work, thanks to the data gathered in WP9 tasks and in close coordination with the WP leaders, in uploading the data in the webtool, updating KPIs during the implementation of the project in conjunction with the submission of the official Reports to CINEA and at the end of the project.

3.5 Communication, dissemination and visibility (n/a for stage 1)

Communication, dissemination and visibility of funding (n/a for stage 1)

Define your target audience(s). Describe the planned communication and dissemination activities to promote the action and its results and maximise the impact (to whom, which format, how many copies, etc.). Clarify how you intend to reach each target audience, relevant stakeholders, policymakers and the public and explain the choice of the dissemination channels. Describe the methods and indicators (quantitative and qualitative) to monitor and evaluate the outreach and coverage of the communication and dissemination activities and results.

Describe how the visibility of EU funding will be ensured.

LIFE CLIMAXPO provides for the implementation of a set of **communication activities** which have both the purpose of making known the aims and contents of the project and actively involving the various stakeholders in the planned activities. A communication plan will be designed and delivered within the first 4 months of the project. The plan will state how the most effective communication can be done and include a strategy, clear communication objectives, target groups, messages and means to communicate the purpose and results of the actions. The plan will follow the whole project cycle from the beginning until the end. For the implementation of the communication activities the following **materials** will be realized:

25 roll ups; 25 notice boards; a general leaflet that describes the project; a brochure on the effects of climate change and the mitigation measures that can be adopted at different levels; a comic for kids; the Layman's Report; 2500 gadgets; 10 video clips, 27 numbers of a digital newsletter.

All the material will be disseminated during the many events planned during the project and also through the channel of beneficiaries and stakeholders involved in the project.

For more details about communication and dissemination activities and information about materials and tools please see T10.1, T10.2, T10.3, T10.4.

Please note that to reduce the **carbon footprint** of the project only digital material will be used. **QR codes** will be used for a massive distribution of materials.

TARGET AUDIENCES

Thanks to the project activities, a wide range of audience will be reached. Below are described the main target audience identified of key importance and how they will contribute toward the project objectives.

1) **Representatives of regional authorities, municipalities, provinces, protected areas, managing bodies of Natura 2000 sites and mountain communities**

The project will directly involve **policy makers** mainly represented by Regional Administrations, Municipalities, Provinces, Mountain Communities and managing bodies of protected areas and Natura 2000 sites. These entities represent important key stakeholders that can contribute significantly to the mitigation of effects of climate change by adopting specific regulations and or pledges. Around **600 people** representing these stakeholders will be reached through the project activities and in particular through task T10.2 a).

2) **Local communities, schools and citizens**

Local communities, citizens and schools will also play an important role in the project at local level. Thanks to the project, more than **10000 citizens** will be directly involved in the Awareness campaign for local communities and citizens (T10.2 b). Furthermore, the educational and training activities implemented with task T10.2 c) will involve **10000 students** and **2000 teachers**.

3) **Professionals and groups of experts**

The project will allow to engage also professional orders (Agronomists, Agrotechnicians, Lawyers, Biologists, Chemists, Geologists - Geomorphologists and Engineers) and groups of experts such as GRAL Alluvioni Group, CISBA - Italian Center for Biological Studies and CIRF - Italian Center for River Restoration. Around **1000 people** will be reached thanks task 10.2 e).

4) **Farmers & Fishermen**

The project provides a set of information and awareness activities dedicated to these categories since they are end-users of the river habitats. Through the communication and awareness initiatives that will see them as protagonists, these stakeholders, will therefore be able to develop a new sensitivity during the project and in the years to come. It is estimated that **500 representatives** of these categories will be engaged through the task T10.2 d).

5) **Companies**

A set of activities will be addressed to companies since they can contribute to the implementation of adaptation strategy. Through a program of regional meetings implemented with task 10.2 f) **50 companies** will be adopted a voluntary code of conduct.

6) Media

The involvement of this stakeholder is essential for communicating and disseminating the contents, aims and results of the project to a wide audience. In particular, journalists from the press, TV and radio as well as web publications will be involved thanks to task T10.3 It is estimated that at least **5 million people** will be reached and informed about the project's activities and results through media relations, social media, web and other communication activities.

7) Scientific community

Universities, research institutes will be the main target of the dissemination and exploitation activities. Through these activities it is estimated that about **500 scientists and researchers** will be reached thanks to tasks T10.4

DISSEMINATION

The project will also devote particular importance to dissemination activities whose main purpose is to make the results available for use, enabling their use and uptake by specific audiences, which may use the results in their own work (e.g., scientific community, policy makers, environmental organizations, etc). For this reason, a specific task (T2.5) will be implemented and a **dissemination plan** will be developed. Dissemination will be carried out through:

- **Participation in seminar and conferences**

During the project rollout, project partners will attend national, European and international seminars, conferences and other events focused on the topics of water and soil management, climate changes, biodiversity and river habitats. The aim is sharing with public institutions, scientific community, environmental NGOs, knowledge and experience on these topics and promoting the project results among the wider set of potential stakeholders. It is estimated that the Consortium will attend in **30 seminar and conferences**.

- **Networking**

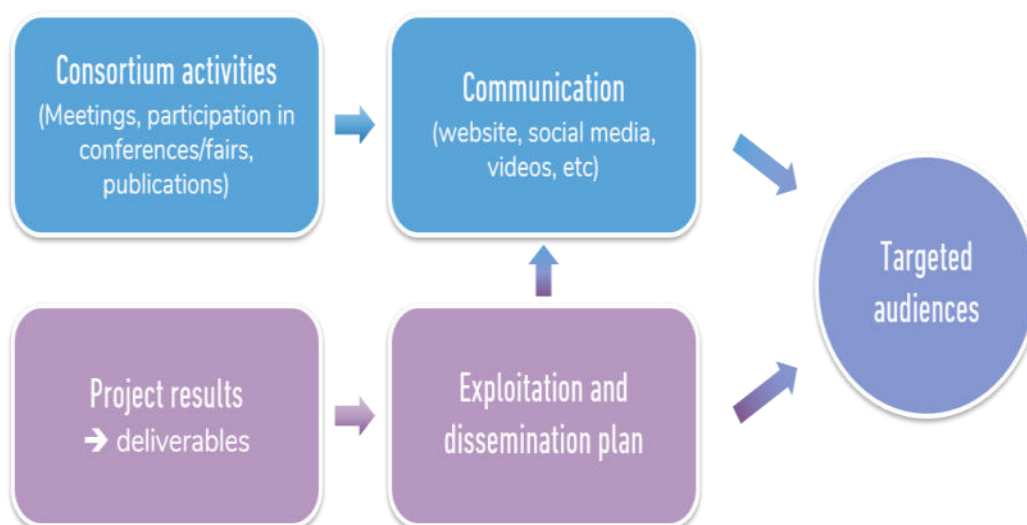
To promote the dissemination of results, exchange of experiences, information and best practices, networking will be carried out with projects dealing with the topics of water and soil management, climate changes, biodiversity, river habitats, etc. It is estimated that will be carried out networking activities with other **20 LIFE e non-LIFE projects**.

- **Scientific publications**

The public disclosure of the project results includes scientific publications. It is estimated that during the project at least **20 articles** illustrating the results of the project will be published in specialized scientific journals and magazines.

For more details about the dissemination activities please see task 10.4.

The following figure shows how communication, dissemination and exploitation will work.



In the next table have been summarized for each target audience, the means involved and the indicator regarding communication, dissemination and exploitation activities.

| COMMUNICATION AND DISSEMINATION ACTIVITIES | | |
|--|---|--|
| TARGET AUDIENCE | MEANS INVOLVED | INDICATORS |
| Public Authorities (Regions, Municipalities, Protected Areas etc.) | 40 training seminars handbook of good practices | n. of participants (600) n. of public authorities adopting CLIMATEPATC4PO (250) people informed by handbook of good practices (600) |
| Local communities and citizens | Itinerant campaign (30 stages) 30 River Café 4 unconventional events | people reached by the itinerant campaign (10000) n. of signed Pledges4River initiative (5000) n. engaged citizens through the unconventional events (1000) n. engaged citizens through 30 River Café (1000) |
| Farmers | 20 training seminar | n. of participants (500) people adopting the code of conduct (250) |
| Fishermen | 20 training seminar | n. of participants (500) people adopting the code of conduct (250) |
| Schools | 1 educational program digital edukit handbook for teachers | n. students involved (10.000) n. teachers involved (2.000) |
| Professionals and groups of experts | 30 webinar | n. participant attend the webinar (1000) |
| Companies | 16 meetings Climate friendly award | n. of participant (240) n. of companies adopting the code of conduct (50) |
| Media | 1 press event, 50 press releases, 100 press kit, 3 educational tour, 1000 posts on social media | people reached by communication activities (5 millions) n. participant to press event (50) n. published news (500) n. TV services (30) |
| Scientific Community | Networking activities conferences and seminars publications | n. of other projects involved (20) n. of conferences attended (30) n. scientific articles (20) |

VISIBILITY OF EU FUNDING

Visibility of EU funding is an important element that will be taken into due consideration during the project since ensuring full transparency on how EU taxpayers' money is spent is a political priority. **LIFE logo** will be used to highlight the visibility of EU funding. In addition, the **funding statement** "Co-funded by the European Union" will always be spelled out in full and placed next to the emblem. The LIFE logo and the funding statement will be always used in all information materials and in all the initiatives/activities/events that will be carried out to communicate and promote the project. To multiply the visibility the support of the EU will be highlighted in media relations and social media activities as well as on the web pages that will be set up to promote the project.

4. RESOURCES

Fill in **only** section 4.1 at stage 1. Fill in **all sections** at stage 2.

4.1 Consortium set-up

Consortium cooperation and division of roles (if applicable)

Describe the consortium composition. How will all the partners together bring the necessary expertise?

In what way does each of the participants contribute to the project? Show that each has a valid role and adequate resources to fulfil that role.

Is the coordinating beneficiary an authority responsible for the implementation of the targeted plan/strategy/action plan? If not, is the responsible authority part of the project consortium and have they mandated the coordinator to implement the SIP/SNAP project on their behalf?

Fill out the Participant information (annex) with more details on the participants and their project teams (key staff).

The project coordinator **ADBPO (Po River Basin District Authority)** has a thirty years' experience in water resources and hydrogeological risk planning through: knowledge building activities; territorial and socio-economic data collection; management and outreach; environmental state and risk conditions analysis; basin plans and tool development for water scarcity and drought management, pursuant to Annex VII of the Water Framework Directive (WFD) and to the Flood Directive.

ADBPO is governed by the Conferenza Istituzionale Permanente (**Permanent Institutional Conference**), a decision-making body chaired directly by the Minister for Ecologic Transition and participated by the National Civil Protection Agency, the Presidents of the Regions located in the river basin district and by the relevant other Ministries.

ADBPO has been appointed in 2015 for the definition of NAS priorities and objectives related to water sector adaptation at the district scale and subsequent implementation, with the aim of further extension of the designed tools and policy instruments to the other six Italian National District Authorities established with Law 221/2015.

ADBPO Permanent Institutional Conference is technically supported and consulted by the **Conferenza Operativa (Operative Conference)** a technical body established within **ADBPO**, which enjoys the participation of national and regional public water managers and experts from the different Ministries and Regions located in the river basin district.

Therefore, **the consortium is led by the National Authority that is responsible for the implementation of the National Adaptation Strategy in the Po River basin district** and it is directly linked with the relevant Ministries (in particular, the Ministry of Ecological Transition) that are responsible for the implementation of the Strategy in the whole country.

Within this project, ADBPO will also be responsible, along with the competent Managing Authorities, for the coordination of funding that will support complementary measures that will contribute to the overall implementation of the NAS in the Po River basin district.

The consortium has been created thanks to the fundamental collaboration of 15 partners who represent national, regional and local public organizations and 5 coming from the private, research and non-profit sectors.

This mix of roles and competences create a multidisciplinary and varied network characterized by a close intertwining between the different thematic strands. This multiplicity of different skills allows the consortium to grasp all the aspects and needs that distinguish the territorial complexity of the Po River basin district.

Even though it is already linked to ADBPO through its Permanent Institutional Conference (Conferenza Istituzionale Permanente), the National Department for Civil protection is expected to participate as direct partner at the time of submission of the full proposal.

The partners have roles in the various actions and WPs according to the topics dealt with.

- some actions are very focused on pilot areas (WP5 to 8)
- some are broader and cover the whole district such as governance of the territory (WP2), stakeholder engagement and capacity building (WP4) monitoring (WP9), dissemination and replication (WP10 and 11)
- some are focused on tools and methodologies (WP3)

- some are mainly centered on issues concerning the management of reservoirs (WP5) or in the hydraulic defense of the territory carried out through monitoring, modeling, or planning interventions (WP7)
- some are based on improving the management of water resources, dealing with issues such as irrigation and land use (WP8) while other focus on nature and ecosystem-based solutions (WP6)

Partners have a different level of involvement according to their level of competence and geographical and administrative outreach and this is reflected also in the project budget.

Nevertheless, the general approach favors a strong collaboration guaranteed by the dense network of relationships between entities and between actions that thus determine a texture that connects the different areas of action, removing barriers and supporting integration of activities in the whole District.

All the partners have been selected for their either **political, financial, or technical expertise and competence** and for their relevance on the territory that makes them **capable of attracting all the necessary stakeholders**.

Finally, they have been selected to **cover all the macro-areas** that have also been identified by the NAS as areas with similar challenges and opportunities for transformative changes to deal with climate risks:

- Alpine and Apennine macro-area
- Lowlands macro-area
- Coastal macro-area
- Metropolitan and diffuse urban centres

All partners will support monitoring, communication, dissemination and exploitation of project activities and results. All partners will activate their network of stakeholders whenever necessary.

Compared to stage 1 of this proposal, the consortium has undergone the following changes:

OUT: The 3 lake regulator bodies (Consorzio del Ticino, Consorzio dell'Adda, Consorzio dell'Oglio) have dropped out as their role was limited to task 5.2 – they have signed a letter of support and committed to contribute to the pilot action on water management of alpine lakes.

OUT: The Municipality of Milan was engaged mainly in a pilot action on deimpermeabilization of urban soil that has deemed not cost-efficient and representative for the implementation of NAS. The Municipality has signed a letter of support and will engage in capacity building activities and multi-level governance.

IN: ARPALO, the Lombardia Regional Environmental Agency has stepped in to support Lombardia Region in technical activities, as well as ARPAE and ARPAP were already doing for Piemonte and Emilia-Romagna region.

IN: SOGESCA, environmental engineering company expert in green management and development of urban adaptation plans, including SECAP under the Covenant of Mayors.

IN: 4 affiliated Legambiente regional environmental association. As affiliates of Legambiente, they will support communication, dissemination, awareness raising, exploitation, replication actions in their regions (Veneto, Lombardia, Piemonte, Valle d'Aosta, Emilia-Romagna) in a dedicated way.

The table below summarizes the structure of the consortium and the main roles of the partners according to their level of governance and institutional role and/or type of organisation represented (not according to the order in the participant portal).

| Short Name | Name in English | Level of Governance Type of Organisation | Role in the project |
|---|-----------------------------------|---|--|
| National Administrations and Organisations | | | |
| ADBPO | Po River Basin District Authority | National authority, Programming role | Coordinator, Leader of the Multilevel governance and Coordination of funding (WP2), coordinator of complementary funding from NRRP. Coordinator of stakeholder engagement and capacity building (WP4); leader of task 5.2 pilot action. Coordinator of Sustainability, Replication and Exploitation actions (WP11) |
| AIPO | Po River Interregional Agency | National agency, Operative role | Support to complementary funding from NRRP. Co-leader with ERSAF of task 6.3 pilot action. Support to ADBPO in multilevel governance and coordination of funding |
| ANBI | National Association for land | National Association of | Leader of task 8.1 pilot action; Contribution to Multilevel Governance (WP2), stakeholder engagement and |

| | | | |
|------------|--|--|--|
| | Reclamation, Irrigation, and Improvement | Land Reclamation Authorities | capacity building (WP4), provision of data to task 3.3. WP10 and WP11; it will be supported by the regional ANBI of Piemonte, Lombardia, Emilia-Romagna and Veneto regions. |
| ANBI ER | Regional Association for land Reclamation, Irrigation, and Improvement | Regional Association of Land Reclamation Authorities | Co-leader of task 8.1 pilot action; Contribution to Multilevel Governance (WP2), stakeholder engagement and capacity building (WP4), provision of data to task 3.3. WP10 and WP11 |
| ANBI LO | Regional Association for land Reclamation, Irrigation, and Improvement | Regional Association of Land Reclamation Authorities | Co-leader of task 8.1 pilot action; Contribution to Multilevel Governance (WP2), stakeholder engagement and capacity building (WP4), provision of data to task 3.3. WP10 and WP11 |
| AMBI P | Regional Association for land Reclamation, Irrigation, and Improvement | Regional Association of Land Reclamation Authorities | Co-leader of task 8.1 pilot action; Contribution to Multilevel Governance (WP2), stakeholder engagement and capacity building (WP4), provision of data to task 3.3. WP10 and WP11 |
| AMBI VE | Regional Association for land Reclamation, Irrigation, and Improvement | Regional Association of Land Reclamation Authorities | Co-leader of task 8.1 pilot action; Contribution to Multilevel Governance (WP2), stakeholder engagement and capacity building (WP4), provision of data to task 3.3. WP10 and WP11 |
| | | | |
| CMCC | Euro-Mediterranean Centre on Climate Change | Research Centre | Technical expert developed the NAS for the Italian Government. Coordinator of the Technical and Methodological approach (WP3); Coordinator of WP6 Pilot actions on Nature and Ecosystem-based solutions; leader of task 6.2 pilot action; Coordinator of WP7 pilot actions on water infrastructure; leader of task 7.2 pilot action; |
| SOGESCA | SOGESCA | Environmental engineering and consultancy company | Technical expert, green management (WP1), technical contribution to Multilevel governance, Capacity building for Local Governments and Utilities (task 4.6); Contribution to monitoring, exploitation and replication (WP9-10-11) |
| UNIBO | University of Bologna | Research Centre (Emilia Romagna) | Technical expert; Coordinator of the Monitoring and Evaluation activities (WP9); Support to task 7.1 pilot action; support to task 7.2 pilot action; support to education actions in WP10 |
| PoliTO | Technical University of Torino | Research Centre (Piemonte) | Technical expert; coordinator of WP5 on water management pilot actions, leader of task 5.3 pilot action on sustainable management of sediments in artificial reservoirs; leader of task 6.1 pilot action; support in task 5.1 pilot action; Support to task 7.1 pilot action; support to task 8.1 pilot action; support to education actions in WP10 |
| | | | |
| RLombardia | Lombardia Region | Regional Authority | Coordination of regional complementary funding (WP2). Contribution to multilevel governance. Regional Stakeholder Boards. Contribution to task 5.2 pilot action on integrated management of great lakes |
| ERSAF | Lombardia Region – Regional Body for Agriculture and Forestry services | Regional technical body | With ADBPO, support to coordination of stakeholder engagement and capacity building (WP4); Co-leader with AIPO of task 6.3 pilot action; Coordinator of WP8 pilot actions on land management; leader of task 8.2 and 8.3 pilot actions |
| ARPALO | Lombardia Regional Agency for Environmental Protection | Regional technical body | Support to CMCC in technical and methodological approach (WP3); support to task 5.2 pilot action; support to task 8.1 pilot action |
| RPiemonte | Piemonte Region | Regional Authority | Coordination of regional complementary funding (WP2). Contribution to multilevel governance. Regional Stakeholder Boards. Contribution to task 5.2 pilot action on integrated management of great lakes |
| ARPAP | Piemonte Regional Agency for Environmental Protection | Regional technical body | Support to CMCC in technical and methodological approach (WP3); support to task 5.2 and 5.3 pilot action; contribution to WP10 and 11 |

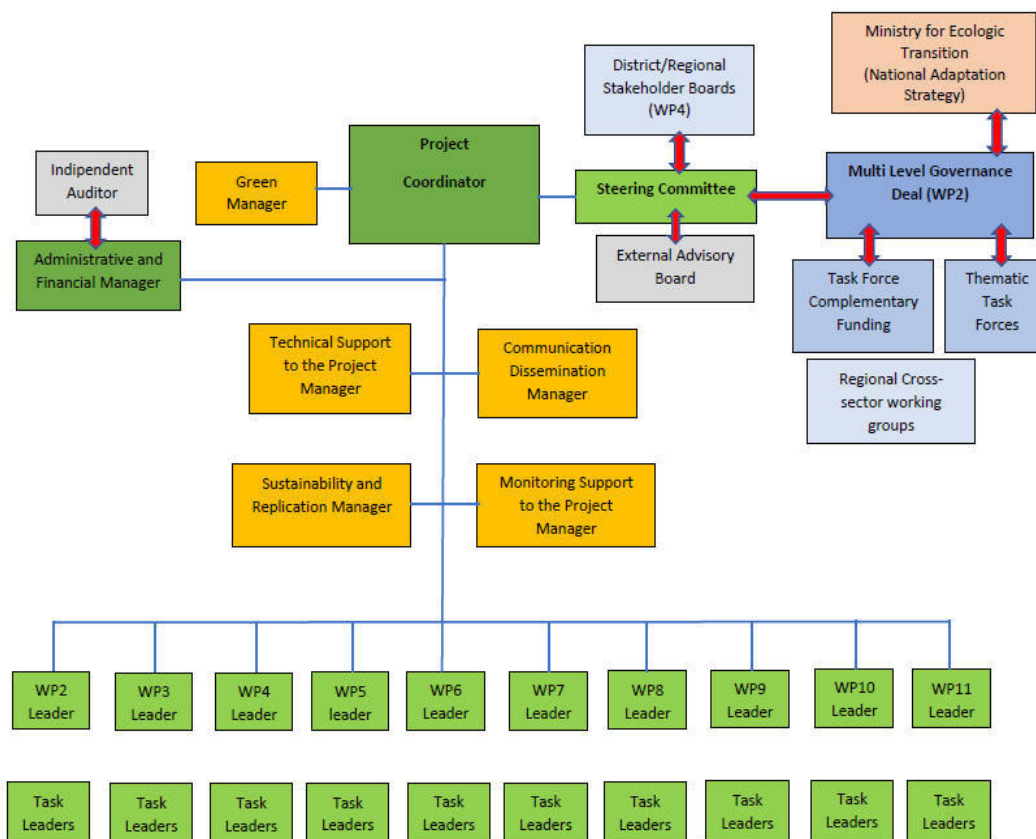
| | | | |
|--------------------|---|--|---|
| RER | Emilia Romagna Region | Regional Authority | Coordination of regional complementary funding (WP2). Contribution to multilevel governance. Regional Stakeholder Boards. Contribution to task 5.2 pilot action on integrated management of great lakes |
| ARPAE | Emilia-Romagna Regional Agency for Environmental Protection | Regional technical body | Technical expert for Emilia-Romagna Region; leader of task 7.1 pilot action; Support to CMCC in technical and methodological approach (WP3); Support to task 7.2 pilot action |
| CMBO | Metropolitan City of Bologna | Provincial Authority | Support in coordination of regional/local complementary funding (WP2); Representative of Metropolitan and diffuse urban centres in stakeholder engagement and capacity building activities (Tas 4.5, 4.7). Cooperation with UNIBO in monitoring (WP9) and with LEGAMBIENTE in dissemination and exploitation; promoter of actions for citizen engagement (WP10) |
| SMAT | Società Metropolitana Acque Torino spa | Torino Municipal Water Service Company | Contribution to multilevel governance; Support to task 7.1 pilot action; Representative of a Metropolitan Utility in stakeholder engagement and capacity building activities (Tas 4.5, 4.7) |
| LEGAMBIENTE | Legambiente onlus | National Environmental NGO | Coordination of Communication, Dissemination and Networking (WP10); Support to Capacity building and Stakeholder engagement (WP4); Support to Multilevel Governance (WP2) and Replication actions (WP11). Supported by its 4 affiliated regional associations in the project regions |
| LEGAMBIENTE LO | Legambiente Lombardia | Affiliated Regional Environmental NGO | Implementation of WP10 and WP11 activities at regional level |
| LEGAMBIENTE VENETO | Legambiente Veneto | Affiliated Regional Environmental NGO | Implementation of WP10 and WP11 activities at regional level |
| LEGAMBIENTE PVA | Legambiente Piemonte e Valle d'Aosta | Affiliated Regional Environmental NGO | Implementation of WP10 and WP11 activities at regional level |
| LEGAMBIETE ER | Legambiente Emilia-Romagna | Affiliated Regional Environmental NGO | Implementation of WP10 and WP11 activities at regional level |

4.2 Project management (n/a for stage 1)

Project management, quality assurance and monitoring of progress (n/a for stage 1)

Describe the management structures and decision-making mechanisms within the consortium. Explain how decisions will be taken and how regular and effective communication will be ensured.

Describe the measures and methods planned to ensure good quality, monitoring, planning and control of project implementation.



Project structure

The chosen project organizational structure (figure above) of the project will allow a fast, coherent and well-accepted decision making process, both aimed at reaching the project objectives with the allocated resources, represented by the CLIMAX Project Steering Committee (SC) to give strategic orientations, to control, monitor and adjust the project in a manageable way, to allocate the community funds and to implement the activities together with the work package leaders and team members. Furthermore, the project structure will also strengthen the already existing co-operations between a number of participants in former EU projects, while also strongly supporting new alliances between other participants and as such promotes cooperative operation towards the execution of the project objectives.

The SC will be set up in order to benefit from the expertise of internal/external organizations as those involved in External Advisory Board (EAB), to interact with other initiatives and to be able to disseminate and replicate the results to the key stakeholders.

Project Management Bodies and roles

The Project Coordinator

The project will be coordinated by ADBPO, who will be empowered to represent the Consortium on a national and international level and who will take the formal lead as contact person with the EC. The coordinator will facilitate efficient operation of the project and will ensure consortium efforts are targeted towards reaching the project objectives.

The coordinator is also directly responsible for the day-to-day operations and will co-operate with the Work Package Leaders.

The coordinator will manage the project and be operationally responsible for the organizational and technical performance of the project. The coordinator is also responsible for monitoring of evolving IPR and, if needed, elaborating proposals how to deal with IPR. Furthermore, he/she will be the contact point

for the consortium for questions related to Risk Assessment management. To achieve this, ADBPO will draft detailed written rules on the common working procedures for communication, decision-making, conflict handling, voting rights and methods for timely reporting to the EC project manager.

The main tasks of the coordinator include:

- Ensure the day-to-day administration and financial coordination of the project
- Promote effective communication between all participants
- Report all activity and financial information during the project duration
- Coordinate the implementation of the work packages
- Monitor the progress of all participants and their compliance with both the Grant Agreement and the Consortium Agreement
- Monitoring of Risk Assessment Plan.

The Steering Committee (SC)

The SC is responsible for the strategic planning and overall direction of the project and the successful implementation of all aspects of the project work plan. One person from each organization will be nominated to this body and each partner will be represented equally. The SC will further assemble for six-monthly face-to-face meetings. Additional meetings or teleconferences can be organised ad-hoc in case of pressing issues, e.g., when an urgent decision regarding the work program is required, in agreement with the coordinator.

Activities of the SC:

- Strategic planning and direction of the project.
- Review of the project's progress, go/no-go decisions and suggestions for improvement
- Approval for replacement or addition of consortium participants
- Monitoring and implementing any changes necessary in the Consortium Agreement
- Governing of the exploitation and dissemination strategy together with the person designated as Communication
- Revision of the project work plan, periodic and financial reports
- Monitoring of the project's progress and of the achievements
- Approval of the quality of key critical deliverables, as defined in the work plan.

The Steering Committee will dialogue directly with the MGD – Multi-level Governance Deal (created in WP2) and its task forces, with the District/Regional Stakeholder Boards (created in WP4) and, of course, the External Advisory Board.

A Responsible for each group of actions or thematic pillar will be defined within the Steering Committee:

- Multilevel Governance
- Complementary Funding
- Approach to overall NAS implementation
- Stakeholders & Capacity Building
- Water Management
- Nature and Ecosystem-base solutions
- Defence and Water Infrastructure
- Land Management
- Water, Adaptation and Urban Centres
- Monitoring and Indicators
- Communication
- Sustainability and Replication.

Work package leaders and task leaders

The work package leaders will be responsible for the management of their work package to ensure the achievement of required objectives and results. Each work package leader will be responsible for the resource and time planning of the work in order to fulfil the objectives and obtain the deliverables and milestones according to the pre-defined time schedule. They will inform the Coordinator of any performance shift within their respective work packages and will propose corrective actions to reach the expected objectives. The work package leaders will assemble every 6 months in the project meetings foreseen to follow up on the execution of the project and to ensure an optimal alignment and effective information exchange between the individual work packages (through live meetings or tele and video conference calls). The main tasks of the work package leaders include:

- Prepare and maintain a work plan for the work package
- Monitor the progress of all WP participants and their compliance with both the Grant Agreement and the Consortium Agreement
- Ensure day-to-day administration and financial coordination of the project
- Review and analyse risks on a permanent basis and coordinate with the coordinator in design and follow up of contingency plans
- Organise regular feedback with the task leaders and involved project partners
- Regularly report WP progress and any possible delays to the coordinator
- Contribute to the content reports as requested by the overall project management.

The work package leaders will be assisted by the task leaders, responsible of the execution of their tasks with respect to content and deliverables in coordination with the other participants.

EXTERNAL Advisory Board

As part of the quality management plan, CLIMAX PO project establishes an External Advisory Board. The aim of this body is to perform an accurate supervision of the project outcomes and tasks in order to detect eventual shortcomings and collaborate in the solution of possible challenges and reinforce cooperation with other national and international river basin districts and foster replication and sustainability.

Given the relevance of the topic when it comes to river basin water management and adaptation to climate change, CLIMAX PO consortium considers the contribution of the Advisory Board members as crucial.

A short list of candidates will be drafted during the kick off meeting with the aim to have an heterogeneous profile of the members to ensure to face the major content challenges that the project can possibly met. At this stage, relevant profiles are: representatives of other Italian and European River Basin Management Authorities, National and International Environmental and Adaptation experts, experts on Socio-economic impacts of adaptation measures, expert on financing tools for adaptation to climate change.

The External Advisory Board will also be the body that will take care of the smooth adoption of the horizontal principles and approaches (multi-level governance, coordination of funding, capacity building, stakeholder engagement, monitoring, replication, sustainability) all over the development of the project.

Furthermore, the Advisory Board members will be crucial in the process of capitalization of the outcomes, gathering from the participation in the body a mutual benefit in terms of knowledge share and positive spill-over effects.

For their contributions, the Advisory Board members will receive a refund of travel costs and living costs during the meetings, that will take place once a year, back-to-back with project meetings or with dedicated online meetings. At least one face-to-face meeting will be organised, then online meetings will be favoured.

WP team members

The partners agree to abide by the Consortium Agreement and to respect the management structure of the project, including the roles and responsibilities of the Project Coordinator, Project Steering Committee and Work Package and Task Leaders. The partners will assist in the effective management of the project by providing the necessary technical and financial information to the Coordinator in a timely and accurate manner for inclusion in formal reports to the Commission. Should partners be unable to fulfil their obligations as detailed in the Consortium Agreement, they will notify the Project Coordinator at the earliest opportunity.

Management of IPR

The consortium agreement (CA), discussed and signed by the partners before start of the project, will include allocation of knowledge generated during the project, starting from the existing background knowledge brought in by each of the partners and possible financial arrangements. The Coordinator and the Steering Committee will monitor the participants' compliance with the consortium guidelines for

common working procedures and assess the project's output in reference to intellectual property. One of the core activities of the Management board will hence be to maintain an objective overview of IPR issues.

Project meetings

Apart from the individual Work Package meetings, held either with all participants in the same physical place, or as teleconferences, video meetings or Skype meetings or similar, the following formal meetings will take place during the project:

- Kick-off meeting (first month, report): all partners will be present and the nominations of the different persons will be agreed upon. The technical and organizational tasks will be discussed in detail and all necessary documentation.
- Major meetings (every 6 months): project management meetings on project progress, organization of the next period, changes and risks management.
- Midterm meeting (end of each phase): It will be a major milestone and reflect the results obtained in the project phase. The future plans for the next half of the project will be reflected. Risks will be particularly reflected upon. Feedback from the External Advisory Board will be sought.
- Minor technical meetings (on request) could be needed for detailed co-operation between the relevant partners working on special issues. The outcome will be reported in written form to all partners.
- Final meeting (month 108): Final results will be reviewed and the dissemination and exploitation will be discussed with all partners and future steps towards the replication and exploitation will be discussed with External Advisory Board members.

Communication, internal and progress/financial reporting

Efficient communication, guaranteeing a full awareness of the project progress by the whole consortium will be ensured by the following means:

- A web-based collaboration platform will be implemented in order to promote and optimize the communication within the consortium. The consortium will use it to share all the project related materials. The Coordinator and WP Leaders will encourage additional exchanges through the promotion of web / phone conferences and bilateral meetings
- Project meetings as described in the section above
- Special attention will be given to the communication with parties outside the Consortium, such as other European project consortia. The planning for publications to be produced, presentations to be given and conferences to be attended on behalf of the Consortium will be a topic addressed at each management board meeting
- A formal reporting will be organized each reporting periods (6 months) but the WP Leaders will provide interim reporting to the consortium every 3 months
- A quality plan document will provide full details of the project structure and operational procedures, in order to ensure high and homogeneous quality in the project outputs. This will include several indicators: risks register, milestones chart, Gantt chart, reports and deliverables status that will be updated by the coordinator. Progress reporting will be monitored and reported by means of the deliverables and intermediate reports relative to the agreed plan and reviewed at the 6-months meetings. Each work package leader will provide his/her partial progress report for that meeting. The partners in each WP are strongly encouraged to give their input to these reports.

The financial situation of the project will be monitored and reported by each partner through Cost Statements and the Coordinator will be supported by an Administrative and Financial Manager.

The coordinator will then prepare a consolidated overview of the budgetary situation of the project, on the basis of the cost statements received from the Partners and the payments that have been made by the EU.

Quality Assurance Plan & peer reviewing procedure

A quality assurance plan will be developed and proposed by the project coordinator as part of WP1 in the form of a Project Work Plan and Project Handbook.

They will be available by month 3 in the project and approved by the management board. The plan and handbook are supposed to function as an operational manual for the consortium, identifying an unambiguous and appropriate workflow between consortium partners and the various roles, designed for the project. The project coordinator will be the responsible of developing and updating the content. The work plan and handbook will identify:

- A clear list of all review, audit and acceptance points in the lifecycle of the project

- A list of internal reviewers and review criteria for each key deliverable
- All types of forms and other documents that must be prepared in the project course, in order to closely track the progress and allow for early problem identification and solving.

The financial situation of the project will be monitored and reported by:

- A special communication flow diagram
- Documents and the precise roles and people involved
- Risks and contingency plans.

Reports and deliverables will be published on the project web site with public reports and deliverables being available in public areas of the project web site. The production of those deliverables and reports will be the responsibility of the partners. The WP Leader will be responsible for assessing the quality of deliverables and reports and be the first line of acceptance. Furthermore, CLIMAX PO will adopt a peer review process to assist the WP leaders with ensuring the high quality of the deliverables. The final draft of main deliverables will be sent (for those not public, under confidentiality restriction) to other partners to undertake a peer review of the work. The feedback from this peer review process will be incorporated into the final deliverable, thus ensuring that it is of a suitably high quality, addresses the relevant target audience, is written clearly and is well presented. The peer review reports and the final content of each deliverable will be reviewed by the project coordinator to ensure that appropriate peer review recommendations are adopted.

Risk management and contingency plan

Risk management and the contingency plan will be placed under the responsibility of the work package leaders and coordinated by the project coordinator and management board. Their objectives will be to:

- make all known project risks explicit before they become problems,
- transform risk data into decision-making information (milestones),
- translate risk information into decisions and mitigating actions (both present and future) and implement those actions,
- monitor risk indicators and mitigation actions,
- correct for deviations from the risk mitigation plans,
- enable the sharing of all information throughout the project.

A risk management register and contingency plan will be set up on the basis of known risk management practices and based on the initial risk management strategy table.

4.3 Green management *(n/a for stage 1)*

Green management *(n/a for stage 1)*

Describe the measures proposed to reduce the environmental impact of your project, for example through the use of green procurement, environmental management systems, etc.

Regarding the management of the project, the possible environmental impacts of the project activities have been considered already in the planning phase of the proposal and will be considered during the whole project period.

The coordinator will be responsible for Green Management and will be supported by SOGESCA, engineering company expert in environmental and energy management systems (EMAS, ISO 14001, ISO 50001), eco-design, eco and green labelling, environmental product declarations and, in general, standards for greener products.

At the beginning of the project, the coordinator and SOGESCA will produce and share guidelines for green project management with indications and procedures (inspired by **EMAS** compliant, environmental management systems) for green (public) procurement, traveling and sustainable (possibly, carbon-neutral) events.

Guidelines will include:

- legally binding laws, such as the Italian legislation on minimum environmental criteria and green public procurement
- voluntarily binding decisions, such as:

- extra environmental criteria to be applied to public and private procurement
- the purchase of **ECOLABEL** products
- Life Cycle and eco-design considerations
- Selecting subcontractors and suppliers according to their green management policies

At this stage, CLIMAX PO has identified already several green management aspects that will be introduced in the guidelines and promoted throughout the project lifetime by partners and involved stakeholders:

▪ **Green procurement.** All the project partners will be encouraged to use green procurement practices for any relevant action. Specific indications will be provided in the guidelines.

▪ **Transport and accommodation.** Traveling to project meetings and for local project activities will be reduced as much as possible to reduce the associated carbon footprint. Learning from the COVID experience, online meetings will be used for progress updates and other technical issues. Face-to-face project meetings will be organised twice a year, with minimum travelling distance due to the geographical coverage of the project. These meetings are necessary to get to know each other and relevant stakeholders, to ensure the exchange of experiences and knowledge and to engage. The locations for the project meetings are chosen to be the most easily accessible for as many project partners as possible. For local travels, partners will be encouraged to use public transport and railway (where possible). As the project aims to build local capacities, it is still crucial to have on-site meetings and have contact with the involved parties.

As to meeting with the external advisory board, members will be physically invited only when strictly necessary and for an initial meeting where it might be useful to get acquainted in person for the first time.

Peer-to-peer exchange and replication visits with National and International representatives of other River Basin Authorities are deemed necessary for fruitful exchange and replication, therefore will be in person. Nevertheless, only one exchange visit per River Basin and per project phase will be organised. Other necessary meetings will be organised online.

▪ **Printing materials and (no) gadgets.** Project partners will promote electronic materials over printed materials (brochures, newsletters, flyers etc.) to optimise resources and avoid printing that would quickly become outdated. In case printing will be necessary, partners and stakeholders will be encouraged to choose a printing company that use environmentally friendly printing practices and recycled paper.

In case of need for gadgets and tools, ECOLABEL products will be favored.

▪ **Organisation of events.** Sustainable and environmentally friendly practices will be also considered during the organisation of events and project meetings (reduced plastic use, sustainable catering services, venue etc.).

Voluntary approaches will be promoted for carbon-neutral events, including the use of tools to measure the environmental impact of the events from:

- the venue (energy efficient, environmentally friendly, representative in terms of location, etc)
- meals (vegan, vegetarian, local, etc.)
- transport and accommodation
- branding: (no) goodies and onsite activities.

4.4 Budget *(n/a for stage 1)*

Estimated budget — Resources *(n/a for stage 1)*

See detailed budget table (annex 1 to Part B).

5. COMPLEMENTARY FUNDING

Fill in this section at stage 1 and stage 2.

Complementary measures

List actions and measures complementary to the SIP/SNAP project that are necessary for the implementation of the targeted plan/strategy/action plan. For each of these actions or measures indicate the potential source of funding and clarify whether it has already been confirmed.

Indicate which of the complementary measures and actions will be closely linked to the project and which are more general measures that will just facilitate the implementation of the targeted plan/strategy/action plan. Provide details on the measures that will be closely linked.

Describe the coordination mechanisms with the managers of different funding instruments in order to ensure most effective use of the funding for the complementary measures.

Describe project activities to mobilise additional funds for the implementation of the targeted plan/strategy/action plan (if any).

Annex the Complementary funding plan.

Note: The SIP/SNAP project and the complementary measures and actions should lead to the full implementation of the targeted plan/strategy/action plan. Therefore the list of complementary measures should be comprehensive and include also future activities or and measures for which there are not yet any sources of funding.

The project has selected 241 action proposals included in the NAS that are applicable to the Po River Basin district and targeted by CLIMAX PO (see attached "Overall Implementation" xls file).

The CLIMAX PO project budget is not nearly sufficient for the implementation of the NAS at District level.

For this reason, the project is focusing on barrier removal, coordinated governance, creation of shared tools and methodologies, capacity building and stakeholder engagement as horizontal activities to foster the implementation of the overall strategy in the district.

Also, the project dedicates pilot approaches on specific focus areas in order demonstrate good practices that can be replicated in other areas of the district and support the demonstration of performances of ecosystem-based approaches in comparison to conventional "grey" measures.

Besides the actions put in place and funded directly by CLIMAX PO, the NAS calls for several complementary actions and measures that need to be implemented.

In some cases, NAS broad adaptation action proposals have been included (often, in a non-consistent way) in existing plans, such as the:

- **River Basin Management Plan** (Piano di Gestione delle Acque, presently under revision)
- **Flood Risk Management Plan** (Piano di Gestione del Rischio Alluvioni, presently under revision)
- **Po River Water Balance Plan** (Piano del Bilancio Idrico)
- **Po River Sediment Management Programme** (Piano Gestione Sedimenti Fiume Po)
- **Drought Management Plan** (Piano per la Gestione delle Siccità)
- **Water protection plans** (Piani di Tutela delle Acque)
- **Guidelines on water use rationalisation**
- **Regional Adaptation Plans** (where available)
- **Regional Water Protection Plans** (must include by law the Po River Basin Management Plan objectives and Key Measures)

Sometimes, these action proposals have already been implemented or are being implemented with Regional and National resources dedicated to the above-mentioned plans which are required by law.

Otherwise, further action is necessary and either project measures and/or complementary funding sources have been indicated in the overall implementation file.

Other action proposals are already implemented via existing tools, working groups, and regional and national legislation, such as:

- ADBPO directive on ecological flow
- Drought modelling system

- Unified Coordination Group on floods
- Unified Coordination Group on droughts
- National Environment Operative Plan
- Leg. Decree 152/2006
- River Contracts

In principle, actions proposal that have not yet been implemented could benefit from the following dedicated sources of funding:

- NRRP - National Recovery and Resilience fund
- National fund for cohesion and development (NFC 2021-2027) for soil protection and flood management
- National Funds from the yearly National Budget Law
- Fund for the financing of investments and infrastructural development of the country (Law n. 232/2016, L.205/2017; L. 145/2018; L. 160/2019)
- National Reservoirs Plan (Piano Nazionale Invasi)

- EU ERDF 2021-2027 (Policy Objective 2) managed at Regional level (OP ERDF 2021-2027)
- EU EAFRD 2021-2022 managed at Regional level, with a 2-year transition period
- EU EMFAF 2021-2027
- Regional Funds from the yearly Regional Administration Budget (connected to Objectives of local “Water Protection Plans” which must enclose by law the PO River Basin Management Plan objectives and Key Measures

- EU ERDF funds in the form of Interreg Projects
- Horizon Europe R&D projects (among which Mission 5 on Climate Adaptation)
- EU LIFE projects on nature, environment and climate adaptation

- Funds from local and regional stakeholders (land reclamation consortia, public/private investments involving land reclamation consortia, bank foundations)

Thanks to the participation in the consortia of Key National Stakeholders (ADBPO, AIPO, ANBI) and key Regional Stakeholders and decision-makers (RLombardia, RPiemonte, RER Emilia-Romagna, and their regional environmental agencies), CLIMAX PO has secured **447.876.192.26€** of complementary funding from National and Regional public sources (343.849.979,26 € already granted).

There are several actions that are closely linked to the project for which the consortium has already secured or is working to secure funding in the short term:

ADBPO – NATIONAL RECOVERY AND RESILIENCE PLAN – Renaturation of the Po River (178.500.000 €, granted)

NRRP – mission 2 – component 4 - Investment 3.3: Renaturation of the Po River – The middle Po Valley stretch - The project is managed by ADBPO and AIPO, Regional Administrations and competent territorial bodies.

This set of measures aims at:

- rebalancing the active morphological processes, implemented also by lowering the navigation groins, which over the years have become too high to be surmounted by the ordinary Po flows, but which are being adjusted in order to guarantee a renaturation action, allowing the current conditions of navigability
- improving hydraulic safety conditions, decreasing as much as possible the hydrodynamic stresses in correspondence of the deforested embankments and guaranteeing the current uses

- recovering the ecological corridor represented by the riverbed and the natural perfluvial area, composed of a considerable diversity of environments (pebbly shores, islands, sandbars, riparian woods, oxbows, ...)

Operational activities linked to CLIMAX PO include the Renaturation of 37 priority areas between the Province of Pavia and the Province of Rovigo, connecting the Lombardia, Emilia-Romagna and Veneto Regions in a territory of ca. 32,431 ha, through:

- Restoration of oxbows and abandoned branches
- Reactivation and reopening of abandoned oxbows and branches
- Reducing the artificiality of the riverbed; lowering groins
- Conservation interventions
- Participatory processes - communication and 15 technical facilitators

ADBPO – National Budget (25.125.655,00€, not granted)

Verification of stability and resistance of the Po River embankments

- New DTM / orthophoto surveys and satellite interferometric data analysis
- Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accountin
- Research and improvement of the state of knowledge to reduce uncertainty.
- Reconstruction of the relationship between land use changes, environmental impacts and resilience of natural and anthropogenic systems to climate change
- Research and improvement of the state of knowledge to reduce uncertainty - investigation of the effects of hydropeaking-thermopeaking phenomena
- Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts

ADBPO - National Cohesion and Development Fund (FSC 2021-2025) (3.028.024€, granted)

Actions for monitoring supporting the implementation of Dir. 2000/60/CE, Water Balande and Underground water.

AIPO – LIFE – SAND BOILS project - Nature-based solution to mitigate flood risk due to sand boils reactivations along the Po River (2.831.933,00€, granted till 2025)

Knowledge creation, facilitation and pilot interventions to mitigate flood risk.

AIPO – CEF - Works for Implementing Navigation in Northern Italy - improving inland waterways, with the objective of the reduction of road transport and the lowering of CO₂ emissions (2.730.000€, granted)

RLOMBARDIA – LOMBARDIA REGIONAL BUDGET – (Reg. Law 9/2020 on economic recovery) (124.207.143,50€, granted) – flood risk mitigation and prevention actions

RLOMBARDIA - LOMBARDIA REGIONAL BUDGET – National budget (21.634.017,60€, granted) – flood risk mitigation and prevention

Widespread measures of flood risk mitigation and prevention: embankments, new construction and adjustments in shape, gutters.

14 measures included in the national budget, out of which 8 on the Po River (for the execution of interventions) and 6 on the Lambro River (2 for the revolving fund for the planning phase and 4 for the execution of works):

1. Restoration of embankments and elimination of traverses on the Lambro River (Design)
2. Controlled flooding area of Rio Brovada-part 1- upstream area (Design)area
3. Completion of the main embankments of the Po River and flow-back areas of the Lambro and Adda
4. Controlled flooding area of Rio Brovada-part 2 valley area
5. Cascinazza flood retention area

6. Adjustment of the main embankment at the confluence of the Po River - Ticino River in the Municipality of Travaccò Siccomario
7. Raising and bulging of the main bank of the river Po in the municipality of San Rocco al Porto
8. Controlled flooding area of the Bevera di Renate creek in Fornaci
9. Raising and bulging of the Po riverbank and of the Po flow-back in Secchia riverbank in the municipality of Quingentole
10. Refurbishment of the Santa Margherita drain on the left bank of the river Po in the municipality of San Daniele Po
11. Raising and bulging works of the river Po main embankment and construction of the embankment rebuttal in the municipality of Carbonara di Po
12. Adjustment of the main embankment on the river Po left bank in the Municipalities of Monticelli Pavese and Chignolo Po
13. Adjustment works of the main embankment of the Po, left bank, from the SS412 bridge at Foce Lambro in the Municipality of Ponte Lambro
14. Re-naturalization of the right bank of the Lambro River upstream of the hydraulic power unit in via Monte Santo / E. Fermi in the municipality of Monza

LOMBARDIA – LOMBARDIA REGIONAL BUDGET – (Reg. Law 9/2020 on economic recovery) (1.680.000,00€, granted) – flood risk mitigation and prevention actions

This budget will be dedicated to the completion of task 6.3 (Wild Lambro).

LOMBARDIA – National budget - flood risk mitigation and prevention (6.050.000€, not yet granted)

RPIEMONTE – PIEMONTE Rural Development Plan 2022-2023 (EAFRD) (1.190.000,00€, granted)

Measures 4.4.1 (Forest buffer strips)

Measures 10.4.3 (Herbaceous buffer strips near arable land)

Measures 10.7.3 (Buffer strips near arable land to preserve biodiversity)

RPIEMONTE – PIEMONTE REGIONAL BUDGET (ERDF 2021-2027) – (25.763.000,00€, not yet granted)

Intervention to increase the resilience of river territories to climate change.

RPIEMONTE – PIEMONTE REGIONAL BUDGET - Green infrastructures for water bodies (2.800.000,00€, granted, 3.000.000,00€, granted)

These are Regional Funds that derive from the collection of fees for public water use to implement the Water Balance Management Plan measures.

RER - REGIONE EMILIA ROMAGNA – ERDF 2021-2027 —Priority 2 – Sustainability, Decarbonization, Biodiversity and Resilience (23.321.678€, not yet granted)

Promotion of adaptation to climate change, risk and hazard prevention, resilience and ecosystemic approaches.

RER - REGIONE EMILIA ROMAGNA - EAFRD 2021-2022 - Rural Development Plan – (20.515.880€, not yet granted)

Support to actions mitigating damages related to climate change in the agricultural and environmental sectors through sustainable water management, forestation, biodiversity preservation and support to farmers.

RER – GECO 2 Interreg Italy-Croatia (438.720€, granted)

Promotion of new and update of existing adaptation plans at local and Regional level.

RER – ADRICLIM Interreg Italy – Croatia – (1.019.100,00€, on going, 455.895,00€, granted)

Support the development of science-based regional and local climate change adaptation plans.

RER – Reforestation project “Mettiamo radici per il future” (3.250.000€, not yet granted)

COMPLEMENTARY FUNDING - COORDINATION MECHANISM and FURTHER INTEGRATION

Due to the relevance of complementary funding for the implementation of concrete measures related to the NAS action proposals, CLIMAX PO has dedicated a full Work Package (WP2) to managing the complex governance of the river basin district and to the **coordination of funding (task 2.4)**.

Within the **Multilevel Governance Deal structure (MGD)**, there will be a dedicated task force to coordination of complementary funding. The spending will be monitored and reported in cooperation with WP9.

ADBPO and AIPO will lead the task force and will work along with the Regional Administration partners (Lombardia, Piemonte, Veneto, Emilia-Romagna) and will engage the other administrative regions that might have an influence on the river basin.

ADBPO and AIPO are governmental structures that are directly linked with the Ministry for Ecologic Transition and the National Civil Protection, and they represent the consortium at National level in the coordination of complementary funding. They will engage the relevant Ministries in order to monitor and influence relevant decision.

Each member will have an internal, intersectoral working group to monitor every possible opportunity of complementary funding as National, Regional and EU structural funds are included in programmes and plans that often spread in different sectors and departments of the same Administration.

The task force will monitor the use of complementary funding integrating the measures already implemented through the LIFE contribution.

Regional Administration partners (Lombardia, Piemonte, Veneto, Emilia-Romagna) will also play a very relevant role as direct Managing Authorities of European Regional Development Funds and EU Agriculture Funds for Regional Development in their territory as well as promoters and users of other relevant National and Regional budget resources.

Research partners will participate in the task force and will provide technical inputs to foster the decision-making process and direct funding.

The consortium will work on influencing the planning of EAFRD 2023-2027 and ERDF, whenever possible, promoting the allocation of funding to measures included in the NAS and related Plans.

Currently, at national and regional level it is unclear the overall responsible for overseeing collectively all these processes, while consistent resources will be managed and allocated by National CIPRESS (Inter-Ministerial Committee for Economic Planning and Sustainable Development, formerly CIPE) which will be a relevant stakeholder in the coordination

COORDINATION WITH OTHER PROJECTS AND INITIATIVES (task 2.5 and WP10)

The project foresees a networking action in WP10 (Dissemination, Communication and Networking) dedicated to building relations with other LIFE initiatives and related projects.

Nevertheless, the MGD task force will dedicate effort to coordinating with ongoing and future EU funded projects that have a specific integration with CLIMAX PO as to mobilising funding in the district for the implementation of climate adaptation measures.

At this stage, very relevant projects are:

LIFE Integrated Project PrepaAIR – coordinated by CLIMAX PO partner RER, focuses on implementation of air quality plans in the Po River basin district (direct link through several project partners)

LIFE Integrated Project GESTIRE 2020 – coordinated by CLIMAX PO partner RLombardia, focuses on implementing the Habitats and Birds directive in the region (direct link through 2 project partners)

Projects like these have a history in integrating complementary funding, already have a mechanism in place and a mobilised network of relevant stakeholder that could support and interact with CLIMAX PO actions.

Several other ongoing projects represent opportunities of cooperation within the area.

MOBILIZATION OF ADDITIONAL FUNDING

The project consortium has assessed the existing bindings and/or funded policies that directly or indirectly relate to climate adaptation, in view of promoting synergies and leverage available funds.

The MGD and its dedicated task force will work also work with the relevant local, regional and national stakeholders to catalyse other additional funding that could directly or indirectly support the implementation of the NAS in the District, such as:

- Regional and National funds
- Further resources from the NRRP
- Private funding (at national and/or local level)
- Development of new EU funded projects

As to new EU funded projects, the project foresees the creation of a working group to plan and develop new proposals to be submitted to the EU Commission and its agencies. At this stage the programmes targeted are:

- Horizon Europe (Cluster 5 and 6, Mission on Adaptation to Climate)
- Interreg (Europe, Alpine Space, Central Europe, Euro-MED, cross-boarder cooperation)
- LIFE
- EAFRD and EARD Regional programmes
- CEF – Connecting Europe Facility

The consortium has already a network of expertise dedicated to the different EU programmes.

6. OTHER

6.1 Ethics

| |
|----------------|
| Ethics |
| Not applicable |

6.2 Security

| |
|-----------------|
| Security |
| Not applicable |

7. DECLARATIONS

| | |
|---|---------------|
| Double funding | |
| Information concerning other EU grants for this project | YES/NO |
|  Please note that there is a strict prohibition of double funding from the EU budget (except under EU Synergies actions). | |
| We confirm that to our best knowledge neither the project as a whole nor any parts of it have benefitted from any other EU grant (including EU funding managed by authorities in EU Member States or other funding bodies, e.g. Erasmus, EU Regional Funds, EU Agricultural Funds, European Investment Bank, etc). If NO, explain and provide details. | |
| We confirm that to our best knowledge neither the project as a whole nor any parts of it are (nor will be) submitted for any other EU grant (including EU funding managed by authorities in EU Member States or other funding bodies, e.g. Erasmus, EU Regional Funds, EU Agricultural Funds, European Investment Bank, etc). If NO, explain and provide details. | |

| |
|--|
| Financial support to third parties (if applicable) |
| <i>If in your project the maximum amount per third party will be more than the threshold amount set in the Call document, justify and explain why the higher amount is necessary in order to fulfil your project's objectives.</i> |
| Insert text |

ANNEXES

LIST OF ANNEXES

1. Complementary Funding Plan
2. Implementation Overview
3. Complementary Funding Declarations
4. Letter of Support
5. Participants information

ANNEXES

COMPLEMENTARY FUNDING PLAN

COMPLEMENTARY FUNDING PLAN

(To be filled in and uploaded as part of the application, together with the Complementary funding declaration from the managing/competent authority confirming funding to complement the LIFE SIP/SNAP proposal.)

| COMPLEMENTARY FUNDING PLAN | | | | |
|--|--|-------------------------|--|--|
| Project name and acronym: | CLIMate Adaptation for the PO river basin district – LIFE IP CLIMAX PO | | | |
| SOURCES OF FINANCING | | | | |
| Name of financing source | Actions / measures to be financed | Amount of funding (EUR) | Status <i>(Granted on [date]/To be granted on [date]/Not yet granted)</i> | Granting authority / Co-financer/ entity managing the fund |
| LIFE SIP/SNAP project | | | | |
| EU contribution | | 10.734.562,19 | | |
| Contribution of beneficiaries | | 7.156.374,94 | | |
| Contribution of co-financers | | 0,00 | | |
| Sub-total | | 17.890.937,13 | | |
| Other EU funds | | | | |
| NRRP – National Recovery and Resilience Plan | ADBPO /AIPO – NRPP – Renaturation of the Po River SECTORS OF NAS AFFECTED: DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT, AGRICULTURE AND FOOD PRODUCTION, HYDROGEOLOGICAL INSTABILITY, WATER RESOURCES, ALPINE AREA AND APENNINES, URBAN SETTLEMENTS <u>WP or related tasks</u> WP4 – Stakeholders Engagement and Capacity Building – lead by AdbPO and ERSAF WP5 – Water Management-lead by POLITO WP6 – Nature and Ecosystem-based solutions – lead by CMCC WP7 – Defence and Water Infrastructure – lead by CMCC WP8 – Water and Land Management – lead by ERSAF | 178.500.000,00 | Granted (Nat. Decree 6 august 2021) | EU/Ministry for Economy and Finance |

| | | | | |
|------------------------|---|--------------|---------------------------|---------------------|
| EAFRD 2014-2020 (2022) | <p>Measures 4.4.1 (Elementi naturaliformi dell'agroecosistema)</p> <p>SECTORS OF NAS AFFECTED: URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> Task 5.2 – Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by ADBPO</p> <p>Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO</p> <p>WP8 – Water and Land Management – lead by ERSAF</p> | 1.190.000,00 | Granted (2022-2023) | Regione Piemonte |
| ERDF 2021-2027 | <p>Policy Objective 2 Action II.2iv.5 - Interventions to increase the resilience of river territories to climate change</p> <p>SECTORS OF NAS AFFECTED: URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin WP5 – Water Management – lead by POLITO WP7 – Defence and Water Infrastructure – lead by CMCC WP8 - Water and Land Management – lead by ERSAF</p> | 25.763.000 | Not yet granted | Regione Piemonte |
| LIFE19-ENV_IT_000071 | <p>AIPO - Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS COASTAL AREAS ALPINE AREA AND APENNINES WATER RESOURCE</p> <p><u>WP or related tasks</u> -Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO -Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO</p> <p>-Task 7.1 - Risk planning and real-time management of critical events generated by storms (small basins in Emilia-Romagna; urban and peri-urban areas of the cities of Turin, Bologna and other cities in Emilia-Romagna and Lombardy) – lead by ARPAE -Task 7.2 - Coastal alert system for extreme water events to adapt to climate change (North Adriatic Coast) - lead by CMCC</p> | 1.552.062,00 | Granted on 2020 till 2025 | European Commission |

| | | | | |
|---|--|----------------------|--|----------------------------------|
| <p>CEF 2014-2020 transport Calls for proposals 2020 MAP</p> | <p>AIPO Action 2020-IT-TM-0034-S WIN-IT: Works for Implementing the Navigation in Northern Italy</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES</p> <p><u>WP or related tasks</u> -Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO -C.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO -Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO</p> | <p>1.365.000,00</p> | <p>Will be granted on Dec 2021 till Dec 2024</p> | <p>European Commission</p> |
| <p>ERDF/ Regional Operational Programme 2021-2027</p> | <p>RER Regional Operational Programme/ European Regional Development Fund (POR-FESR)</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES</p> <p><u>WP or related tasks</u> WP5 - Water Management – lead by POLITO WP6 - Nature and Ecosystem-based solutions - lead by CMCC WP7 – Defence and Water Infrastruture – lead by CMCC WP8 - Water and Land Management</p> | <p>23.321.678,00</p> | <p>Not yet granted ERDF Regional Operational Programme under approval and subsequently allocated in the CLIMAX PO project phase. The sum indicated will be made available during the project period.</p> | <p>Emilia Romagna Region</p> |
| <p>EAFRD/ Rural Development Plan 2021-2022</p> | <p>RER Rural Development Plan/ European Agricultural Fund for Rural Development (PSR- FEASR)</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, AGRICULTURE AND FOOD PRODUCTION</p> <p><u>WP or related tasks</u> WP5 - Water Management – lead by POLITO WP6 - Nature and Ecosystem-based solutions - lead by CMCC WP8 - Water and Land Management</p> | <p>20.515.880,00</p> | <p>Not yet granted. The Emilia- Romagna Region will allocate an economic sum (potential commitment of expenditure) on LIFE CLIMAX PO project measures. The sum indicated will be made available during the project period.</p> | <p>Emilia Romagna Region</p> |

| | | | | |
|--|--|----------------------------|---|---|
| EAFRD/ Rural Development Plan 2023-2027 | <p>RER</p> <p>Rural Development Plan/ European Agricultural Fund for Rural Development (PSR- FEASR)</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, AGRICULTURE AND FOOD PRODUCTION</p> <p><u>WP or related tasks</u> WP5 - Water Management – lead by POLITO WP6 - Nature and Ecosystem-based solutions - lead by CMCC WP8 - Water and Land Management</p> | To be confirmed | The RDPs in the new 2023-2027 programming period will take into account the CLIMAX PO project. Not yet granted | Emilia Romagna Region |
| 2014 - 2020 INTERREG V-A Italy – Croatia | <p>ADRIACLIM ARPAE ER (LP) ADRIACLIM - RER</p> <p>SECTORS OF NAS AFFECTED: URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> WP4 - Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC WP10 - Communication, Dissemination and Networking</p> | 1.019.100,00 455.895,00 | On going (end date 31/12/2022) Granted. | 85% ERDF INTERREG; 15% co-financing Italy Revolving Fund |
| 2014 - 2020 INTERREG V-A Italy – Croatia | <p>RER - GECO2 - ARPAE ER (LP)</p> <p>SECTORS OF NAS AFFECTED: URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> WP5 – Water Management - lead by POLITO WP8 - Water and Land Management</p> | 438.720,00 | On going (end date 31/05/2022) Granted. | 85% ERDF INTERREG; 15% co-financing Italy Revolving Fund |
| Sub-total | | 254.121.335,00 | | |
| Other public funds | | | | |
| National Cohesion and Development Fund (FSC 2021-2025) | <p>ADBPO – National Cohesion and Development Fund – L1 Monitoraggio a supporto dell’attuazione della Direttiva 2000/60/CE –</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS; DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT; WATER RESOURCES</p> <p><u>WP or related tasks</u> Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO</p> | 2.128.024,00 | Granted on 2021 till 2025 | ADBPO |

| | | | | |
|--|--|--------------|---------------------------|---------------------|
| National Cohesion and Development Fund (FSC 2021-2025) | <p>ADBPO – National Cohesion and Development Fund – L2 Bilancio idrico –</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS; DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT;</p> <p><u>WP or related tasks</u> WP5 – Water Management - lead by POLITO</p> <p>-Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO</p> | 250.000,00 | Granted on 2021 till 2025 | ADBPO |
| National Cohesion and Development Fund (FSC 2021-2025) | <p>ADBPO – National Cohesion and Development Fund – L3 Acque sotterranee</p> <p>SECTORS OF NAS AFFECTED: COASTAL AREAS</p> <p><u>WP or related tasks</u> -Task 6.1 - Nature-based solutions for riparian area management – lead by POLITO</p> <p>-Task 8.1 - Sustainable and adaptive irrigation agriculture - lead by ANBI</p> | 650.000,00 | Granted on 2021 till 2025 | ADBPO |
| National funds | <p>ADBPO – 1 National budget - Verification of stability and resistance of the Po river embankments</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, COASTAL AREAS, INLAND AND TRANSITIONS WATER ECOSYSTEMS, ALPINE AREA AND APENNINES, URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> - Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO - Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC - Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI</p> | 6.000.000,00 | Not yet Granted | National Government |

| | | | | |
|----------------|---|---------------|-----------------|---------------------|
| National funds | <p>ADBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, ALPINE AREA AND APENNINES, COASTAL AREAS</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC - Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI - WP3 – Technical and Methodological Approach – lead by CMCC - Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO | 10.000.000,00 | Not yet Granted | National Government |
| National funds | <p>ADBPO – 5 National budget - Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accounting</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI - WP3 – Technical and Methodological Approach – lead by CMCC WP5 – Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by ADBPO | 2.000.000,00 | Not yet Granted | National Government |
| National funds | <p>ADBPO – 7 National budget - Research and improvement of the state of knowledge to reduce uncertainty. Reconstruction of the relationship between land use changes, environmental impacts and resilience of natural and anthropogenic systems to climate change</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF - Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO | 750.000,00 | Not yet Granted | National Government |

| | | | | |
|----------------|---|--------------|-----------------|---------------------|
| National funds | <p>ADBPO – 10 National budget - Research and improvement of the state of knowledge in order to reduce uncertainty - investigation of the effects of hydropeaking-thermopeaking phenomena</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF - Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF | 75.000,00 | Not yet Granted | National Government |
| National funds | <p>ADBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, ALPINE AREA AND APENNINES, DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT, PO RIVER HYDROGRAPHIC DISTRICT</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - WP3 – Technical and Methodological Approach – lead by CMCC - Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF - WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF - WP7 – Defence and Water Infrastructure – lead by CMCC - Task 10.1 - Communication plan and information materials – lead by LEGAMBIENTE | 6.300.655,00 | Not yet Granted | National Government |

| | | | | |
|---|--|--------------|---------------------------------------|------------------|
| <p>Regional Funds that derive from the proceeds of the fees for public water use to implement the WBMP measures</p> | <p>Green infrastructures for water bodies</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS, ALPINE AREA AND APENNINES; DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO - Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC - Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO | 2.800.000 | Granted (2021-2023) | Regione Piemonte |
| <p>Regional Funds that derive from the proceeds of the fees for public water use to implement the WBMP measures</p> | <p>Green infrastructures for water bodies</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS, ALPINE AREA AND APENNINES; DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO - Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC - Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO <p>WP5 – Water Management – Lead by POLITO</p> | 3.000.000 | Granted (2022-2023) | Regione Piemonte |
| <p>Regional Funds to implement flood directive measures</p> | <p>RLombardia – flood risk mitigation and prevention and Green infrastructures for water body (T6.3 "Lambro Selvaggio")</p> <p>SECTORS OF NAS AFFECTED: ALPINE AREA AND APENNINES</p> <p><u>WP or related tasks</u></p> <ul style="list-style-type: none"> - Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po River Basin – Lead by CMCC Task 9.2 - Monitoring of the socio-economic impact of the project – Lead by UNIBO | 1.680.000,00 | GRANTED (Reg. Law 9/2020 on economic) | Lombardia Region |

| | | | | |
|---|--|-----------------------|--|----------------------------|
| <p>Regional Funds to implement flood directive measures</p> | <p>RLombardia flood risk mitigation and prevention</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS, COASTAL AREAS, URBAN SETTLEMENTS, HYDROGEOLOGICAL INSTABILITY, WATER RESOURCES</p> <p><u>WP or related tasks</u> Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF Task 7.1 - Risk planning and real-time management of critical events generated by storms (small basins in Emilia-</p> | <p>124.207.143,50</p> | <p>GRANTED (Reg. Law 9/2020 on economic)</p> | <p>Lombardia Region</p> |
| <p>National Funds – National agreement</p> | <p>RLombardia – National budget – flood risk mitigation and prevention</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS, COASTAL AREAS, URBAN SETTLEMENTS, HYDROGEOLOGICAL INSTABILITY, WATER RESOURCES</p> <p><u>WP or related tasks</u> Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO R.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF Task 7.1 - Risk planning and real-time management of critical events generated by storms (small basins in Emilia-Romagna; urban and peri-urban areas of the cities of Turin, Bologna and other cities in Emilia-Romagna and Lombardy) – lead by ARPAE</p> | <p>21.634.017,60</p> | <p>GRANTED</p> | <p>National Government</p> |

| | | | | |
|----------------------|---|--------------|---------------------------|------------------------------|
| National Funds | <p>RLombardia – National budget - flood risk mitigation and prevention</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS, COASTAL AREAS, URBAN SETTLEMENTS, HYDROGEOLOGICAL INSTABILITY, WATER RESOURCES</p> <p><u>WP or related tasks</u> Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF</p> | 6.050.000,00 | NOT YET GRANTED | National Government |
| LIFE19-ENV_IT_000071 | <p>AIPO - Natural-based solution to mitigate flood risk due to SAND BOILS reactivations along the Po River</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS COASTAL AREAS ALPINE AREA AND APENNINES WATER RESOURCES</p> <p><u>WP or related tasks</u> -Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO -Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO -Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO</p> | 1.279.871,00 | Granted on 2020 till 2025 | AIPO and other beneficiaries |

| | | | | |
|---|--|-----------------------|--|---|
| <p>CEF 2014-2020 transport Calls for proposals 2020 MAP</p> | <p>AIPO - Action 2020-IT-TM-0034-S WIN-IT: Works for Implementing the Navigation in Northern Italy</p> <p>SECTORS OF NAS AFFECTED: INLAND AND TRANSITIONS WATER ECOSYSTEMS COASTAL AREAS ALPINE AREA AND APENNINES WATER RESOURCES</p> <p><u>WP or related tasks</u> -Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO -Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO -Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO - Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF</p> | <p>1.365.000,00</p> | <p>Granted on Dec 2021 till Dec 2024</p> | <p>AIPO and other beneficiaries</p> |
| <p>RER</p> | <p>RER - Reforestation project “Mettiamo radici per il futuro”</p> <p>SECTORS OF NAS AFFECTED: WATER RESOURCES, COASTAL AREAS, HYDROGEOLOGICAL INSTABILITY, DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT, ALPINE AREA AND APENNINES, URBAN SETTLEMENTS</p> <p><u>WP or related tasks</u> - WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO - WP3 – Technical and Methodological Approach – lead by CMCC - WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF - Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC - WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO</p> | <p>3.250.000,00</p> | <p>Not yet granted.</p> | <p>Regional Government</p> |
| Sub-total: | | 193.419.711,10 | | |
| Other private funds | | | | |
| [Private programme X] | | | | |
| [Private fund Y] | | | | |
| [etc.] | | | | |
| Sub-total | | | | |
| Other international funds | | | | |

| | | | | |
|--------------------------------|--|-----------------------|------------|-----------------------------------|
| Bundesamt für Umwelt BAFU (CH) | AIPO - Advanced Fiber Optical Monitoring System for Levees: Testing facility | 335.146,16 | April 2022 | OST Ostschweizer Fachhochschule – |
| [International fund y] | | | | |
| [etc.] | | | | |
| Sub-total | | 335.146,16 | | |
| TOTAL | | 447.876.192,26 | | |

| HISTORY OF CHANGES | | |
|---------------------------|------------------|---|
| VERSION | PUBLICATION DATE | CHANGE |
| 2.0 | 10.10.2022 | Initial version (new MFF). |
| 3.0 | 25.10.2022 | First revision version - changes according to LIFE21 SIPC GAP-IT-9928.docx revision points: <ul style="list-style-type: none"> - addition of more details on funds status in the Complementary Funding Plan; - correction of the declarations for the Region Piemonte under the Complementary Funding Declarations. |
| | | |
| | | |
| | | |

ANNEXES

IMPLEMENTATION OVERVIEW

| Implementation Overview | | | | | | | | |
|------------------------------------|-----------------|--|----------------|-----------------------------------|---|-----------------------------|---|--|
| National Adaptation Strategy - NAS | | | | | Included in existing Plan or Tool | | How will full implementation of the Plan/Strategy/Action plan be achieved | |
| ID | Sector | Action Proposal | Type of Action | Indicator / target / deadline | Plan or Tool | Used / Implemented by | Implemented (Y/N) | If Yes, list relevant actions, complementary actions, key targets/deadlines If not, explain how the Plan/Strategy/Action plan will be achieved, and by when |
| 1 | WATER RESOURCES | PLANNING OF COMPLEX SCHEMES (COORDINATION EFFORT) TO STABILIZE THE EXPECTATION ABOUT AVAILABILITY | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 2 | WATER RESOURCES | DEVELOP THE CAPACITY OF MULTI-YEAR MANAGEMENT OF WATER RESOURCES IN AREAS THREATENED BY SCARCITY AND DROUGHT | SOFT | Short term (before 2020) | Drought management plan (PBI, Allegato 3 - Direttiva Magre) | AdBPO | Y | |
| 3 | WATER RESOURCES | REVIEW WATER NEEDS AND HISTORICAL WATER CONCESSIONS IN ACCORDANCE WITH THE PLANS AND PROGRAMS IN FORCE (PDB, PDA, PTA) | SOFT | Short term (before 2020) | 1) Po river Water balance plan (PBI) 2) Water use and protection Plan (PTUA) | 1) AdBPO 2) Regions | Y | ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 4 | WATER RESOURCES | DEVELOP INTEGRATED PROGRAMS TO IMPROVE THE EFFICIENCY OF WATERING, DRINKING AND INDUSTRIAL USES TO OPTIMIZE CONSUMPTION AND AT THE SAME TIME REDUCE THE WITHDRAWAL FROM NATURAL WATER BODIES | SOFT | Short term (before 2020) | | | Y | AdBPO – 5 National budget - Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accounting |
| 5 | WATER RESOURCES | REVIEW OF REGULATIONS ON REUSE (DM 185/2003) AND OF DISCHARGES ON THE GROUND (TABLE 4 ALL 5 TO PART III DLGS 152/2006) | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 6 | WATER RESOURCES | DROUGHT MANAGEMENT PLANS / PROGRAMS AT THE TERRITORIAL SCALE CONCERNED (DISTRICT / SUB-BASINS) AND ITS POSSIBLE SECTORAL ARTICULATIONS | SOFT | Short term (before 2020) | 1) Drought management plan (PBI, Allegato 3 - Direttiva Magre) | AdBPO | Y | |
| 7 | WATER RESOURCES | INCLUDE INDEX VARIABLES RELATED TO CLIMATE CHANGE IN THE STRATEGIC ENVIRONMENTAL ASSESSMENT | SOFT | Long term (Beyond 2020) | VAS (STRATEGIC ENVIRONMENTAL ASSESSMENT) | ISPRA | Y | |
| 8 | WATER RESOURCES | NEW CODES FOR WATER SAVING IN THE CONSTRUCTION SECTOR; | SOFT | Long term (Beyond 2020) | CAM (MINIMUM ENVIRONMENTAL CRITERIA) | MITE | Y | |
| 9 | WATER RESOURCES | DEFINE MEASURES FOR THE RECOVERY OF RAINWATER WITHIN THE REQUIREMENTS FOR THE ISSUANCE OF BUILDING PERMITS; | SOFT | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 10 | WATER RESOURCES | ESTABLISH MINIMUM AND CERTAIN RULES FOR THE FINANCING OF STRUCTURES AND INFRASTRUCTURES; | SOFT | Long term (Beyond 2020) | | | N | |
| 11 | WATER RESOURCES | ENCOURAGE PARTICIPATIVE FORMS FOR THE MANAGEMENT OF RESOURCES, ALSO INCLUDING THE "RIVER CONTRACTS", "LAKE CONTRACTS" AND "GROUND WATER CONTRACTS" | SOFT | Short and Long term (Beyond 2020) | River Basin Management plan (RBMP) | AdBPO | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 12 | WATER RESOURCES | REVIEW / ADJUSTMENT OF THE DEMANIAL RENTALS AND RATES ALSO CONSIDERING THE ENVIRONMENTAL COSTS FOR A MORE EFFICIENT ALLOCATION OF THE WATER RESOURCE | SOFT | Short term (before 2020) | River Basin Management plan (RBMP) - Measure applied by the Region Piemonte | AdBPO | Y | |
| 13 | WATER RESOURCES | MAKE AN INVENTORY AND PROTECTING TERRESTRIAL ECOSYSTEMS DEPENDING ON UNDERGROUND WATERS (GWDTESS) | SOFT | n.d. | River Basin Management plan (RBMP) | AdBPO | Y | Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |

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| 14 | WATER RESOURCES | OPTIMIZED DEMAND MANAGMENT | SOFT | Short term (before 2020) | Permanent observatory for water uses in the hydrographic district of the river Po | Public bodies, policy makers and users (AdBPO) | Y | |
| 15 | WATER RESOURCES | OPTIMIZED MANAGEMENT OF LAKES AND BASINS LEVELS | SOFT | Short term (before 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PolITO AIPO - Natural-based solution to mitigate flood risk due to sand boils reactivations along the Po River |
| 16 | WATER RESOURCES | ENCOURAGE COLLECTIVE MANAGEMENT FOR THE IRRIGATION SECTOR | SOFT | Long term (Beyond 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 17 | WATER RESOURCES | MANAGEMENT MEASURES FOR THE RATIONALIZATION OF WATER CONSUMPTION | SOFT | n.d. | 1) Guidelines on water consumption rationalisation (PDGBO) 2) National regulation on water accounting systems | Public bodies and policy makers (AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI AdBPO – 5 National budget - Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accounting |
| 18 | WATER RESOURCES | RAIN LEAKAGE MANAGEMENT IN URBAN AREAS AND THEIR USE | SOFT | Long term (Beyond 2020) | River Basin Management plan (RBMP) | AdBPO | Y | Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE |
| 19 | WATER RESOURCES | ADAPT THE MANAGEMENT OF WASTEWATER TREATMENT PLANTS AND RELATED SEDIMENTS TO A GREATER FREQUENCY OF EXTREME EVENTS (FLOODS, DROUGHT, ETC) | SOFT | Long term (Beyond 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 20 | WATER RESOURCES | IRRIGATION REORGANIZATION, CHANGES TO IRRIGATION EXERCISES AND FINANCING PLANS; | SOFT | Long term (Beyond 2020) | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 21 | WATER RESOURCES | ADAPTATION OF FOREST MANAGEMENT RULES FOR THE IMPROVEMENT OF THE WATER BALANCE | SOFT | Long term (Beyond 2020) | Po river Water balance plan (PBI) | AdBPO | Y | Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC ADBPO - National Cohesion and Development Fund (FSC 2021-2025) RER - Reforestation project “Mettiamo radici per il future |
| 22 | WATER RESOURCES | DISSEMINATION AND USE OF THE MOST ADVANCED INFORMATION AND DECISION SUPPORT SYSTEMS | SOFT | Long term (Beyond 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 23 | WATER RESOURCES | INCENTIVES FOR LOW WATER USE INTENSITY PRODUCTS AND TECHNOLOGIES FOR THE USE OF POOR QUALITY WATER (GREY WATER); | SOFT | Short term (before 2020) | | | N | |
| 24 | WATER RESOURCES | ENCOURAGE COLLECTIVE MANAGEMENT FOR THE IRRIGATION SECTOR; | SOFT | Long term (Beyond 2020) | | | Y | NRRP - Investments in the resilience of the irrigation agro-system for a better management of water resources |
| 25 | WATER RESOURCES | SUPPORT BUSINESS PLANNING, INNOVATION AND MODERNIZATION OF MANAGEMENT IN THE AGRICULTURAL FIELD | SOFT | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |

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| 26 | WATER RESOURCES | SUPPORT THE DIVERSIFICATION OF ACTIVITIES AND PRODUCTION IN THE AGRICULTURAL FIELD IN RELATION TO THE CHANGING PHENOLOGY TAKING INTO ACCOUNT THE DIFFERENT TYPES OF SOIL AND CLIMATE AND WATER AVAILABILITY | SOFT | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 27 | WATER RESOURCES | PLANNING OF ECONOMIC INSTRUMENTS FOR CLIMATE RISK MANAGEMENT (INSURANCE, MUTUAL FUNDS, ETC.); | SOFT | Short term (before 2020) | | | Y | NRRP - Investments in the resilience of the irrigation agro-system for a better management of water resources |
| 28 | WATER RESOURCES | TAYLORED FINANCIAL SUPPORT AIMED AT ACHIEVING THE OBJECTIVES OF ADAPTATION TO CLIMATE CHANGE, IN PARTICULAR FOR INTERVENTIONS THAT ENSURE WATER AVAILABILITY OVER THE YEARS AND INCREASE ITS USE EFFICIENCY (LOANS, MORTGAGES, TAX BREAKS, CAPITAL GRANTS, ETC.); | SOFT | Long term (Beyond 2020) | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 29 | WATER RESOURCES | FUNDS FOR THE PRIMARY SECTOR IN AREAS SUBJECT TO DROUGHT AND UNCERTAINTY OF WATER AVAILABILITY | SOFT | Long term (Beyond 2020) | | | Y | EAFRD - 2021-22 and 2023-27 regional development plans |
| 30 | WATER RESOURCES | INCENTIVES FOR LAND OWNERS TO IMPROVE RETENTION CAPACITY | SOFT | Short term (before 2020) | | | Y | EAFRD - 2021-22 and 2023-27 regional development plans |
| 31 | WATER RESOURCES | REVISION OF THE FINANCING SYSTEMS FOR INFRASTRUCTURES WITH RESPECT TO THE SPECIFIC HYDROGEOLOGICAL CHARACTERISTICS. | SOFT | n.d. | | | Y | NRRP - Investments in the resilience of the irrigation agro-system for a better management of water resources |
| 32 | WATER RESOURCES | DEVELOPMENT AND ENHANCEMENT OF DECISION SUPPORT SYSTEMS (IRRIGATION CONSULTING SERVICES, EARLY WARNING SYSTEMS FOR VARIOUS RISKS: DROUGHT, FLOODS, LANDSLIDES, OVERFLOW, PHYTOPATHIES AND PATHOGENIC ATTACKS) | SOFT | Short term (before 2020) | 1) IRRIFRAME - IRRINET (Irrigation service) - At national level 2) Permanent observatory for water uses in the hydrographic district of the river Po 3) Platform FEWS/DEWS | 1) AMBI (ARPAE - Emilia Romagna Region) 2) Public bodies, policy makers and users (AdBPO) 3) Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 33 | WATER RESOURCES | RESTORATION OF A NATIONAL HYDROGRAPHIC SERVICE, WHICH HAS THE TASK OF COLLECTING AND HOMOGENIZING THE DATA DETECTED BY THE REGIONAL HYDROGRAPHIC SERVICES | SOFT | Short term (before 2020) | National Environment Operative Plan (POA - Piano operativo per l'ambiente) | ARPA (AbDPO - ISPRA) | Y | |
| 34 | WATER RESOURCES | CONSTRUCTION OF THE WATER BALANCE AT COUNTRY SCALE. DATA ARE REQUIRED BY EUROSTAT AND ARE ESSENTIAL FOR THE IMPLEMENTATION OF WATER RESOURCE MANAGEMENT POLICIES | SOFT | Short term (before 2020) | 1) Permanent observatory for water uses in the hydrographic district of the river Po 2) FEWS-DEWS Platform | 1) Public bodies, policy makers and users (AdBPO) 2) Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 35 | WATER RESOURCES | MONITORING THE ENVIRONMENTAL TRANSFORMATION INDICATORS COMPARING THEM WITH THE VALUES OBTAINED FOR THE REFERENCE SITES | SOFT | Long term (Beyond 2020) | River Basin Management plan (RBMP) | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 36 | WATER RESOURCES | IMPROVING AND MATCHING SURFACE AND GROUNDWATER MODELS TO OBTAIN MORE RELIABLE ESTIMATES ON RESOURCES AND USES CONSISTENCY | SOFT | Short term (before 2020) | UCG Magre – Update of the modelling system | Civil protection - Regions (AIPO - AdBPO) | Y | |

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| 37 | WATER RESOURCES | IMPROVE THE UNDERSTANDING OF CLIMATE CONTROL FACTORS AND SOIL FEEDBACK | SOFT | Long term (Beyond 2020) | | | Y | Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF AdBPO – 7 National budget - Research and improvement of the state of knowledge to reduce uncertainty. |
| 38 | WATER RESOURCES | HIGH RESOLUTION SURVEYS TO IDENTIFY THE AREAS THAT ARE MOST VULNERABLE TO FLOODS AND DROUGHT | SOFT | Long term (Beyond 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC AdBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis |
| 39 | WATER RESOURCES | COLLECT AND DISCLOSE AVAILABLE INFORMATION ON CLIMATE CHANGE | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 40 | WATER RESOURCES | DISCLOSE INFORMATION ON THE EXISTENCE OF GOOD PRACTICES IN THE AGRICULTURAL AND INDUSTRIAL FIELDS | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP11 – Sustainability, Replication and Exploitation – lead by AdBPO |
| 41 | WATER RESOURCES | AWARENESS RAISING CAMPAIGNS IN AREAS AFFECTED BY CHANGES IN THE HYDROLOGICAL CYCLE WITH THE INVOLVEMENT OF CITIZENS AND ASSOCIATIONS | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 42 | WATER RESOURCES | AWARENESS RAISING CAMPAIGNS FOR PROPERTY OWNERS ON HYDROLOGICAL RISKS, RISK MITIGATION MEASURES AND REDUCTION OF ENERGY CONSUMPTION | SOFT | Long term (Beyond 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 43 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | IMPROVEMENT OF KNOWLEDGE OF PHENOMENA: PROMOTION AND ADEQUATE SUPPORT OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH, DISSEMINATION OF RESULTS, ENCOURAGEMENT AND STIMULATION FOR THE ESTABLISHMENT OF INTEGRATED WORKING GROUPS, ALSO THROUGH THE PROMOTION OF PUBLIC AND PRIVATE PARTNERSHIPS AND INTERNATIONAL PARTNERSHIPS | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 44 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEFINITION OF SOIL AND TERRITORY MONITORING PLANS FOR THE DEFINITION OF THE TERRITORY VULNERABILITY FACTORS, LOCAL SCALE AND INTEGRATED STATE INDICATORS (ENVIRONMENTAL, SOCIAL AND ECONOMIC), ASSESSMENT OF THE CONTEXT. PREVENTIVE ASSESSMENT OF THE RISK LINKED TO THE VULNERABILITY FACTORS WITH CONSEQUENT EVALUATION OF DIRECT AND INDIRECT EFFECTS, MONITORING OF THE RESULTS OF ADAPTATION ACTIONS THROUGH THE USE OF SENSITIVE INDICATORS | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF AdBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts |
| 45 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PREPARATION OF ACTION PLANS AT NATIONAL, REGIONAL, LOCAL LEVEL BASED ON KNOWLEDGE AND ANALYSIS OF THE TERRITORY, ON THE DEFINITION OF POSSIBLE SYNERGIES OR IMBALANCES BOTH IN NATURAL SYSTEMS AND IN THE ASSESSMENT OF ECONOMIC AND SOCIAL COSTS AND ON THE EVALUATION OF THE ECONOMIC IMPLICATIONS | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF AdBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts RER (partner), ARPAE (lead partner), UNIBO (partner) - ADRIACLIM - Promotion of new and update of existing adaptation plans at local and Regional level NRRP - Integration of complementary funds through the NRRP instrument |

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| 46 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEFINITION OF SPATIAL PLANNING PLANS AND PROGRAMS BASED ON KNOWLEDGE OF SOIL AND ITS PROCESSES AND, ABOVE ALL, AIMED AT PREVENTING ENVIRONMENTAL DEGRADATION, PROMOTING A DISRUPTIVE CHANGE IN THE CULTURE OF ENVIRONMENTAL PROTECTION THAT TAKES INTO ACCOUNT THE LONG TIMES OF SOIL DEGRADATION AND DESERTIFICATION; | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | SINACLOUD - Catrographic platform with climate indicators and risks at national level foreseen by the NAP and to be integreted by CLIMA PO Platform (WP3) |
| 47 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | CREATION OF PROGRAMS FOR INTEGRATION OF LOCAL POLICIES, WITH REFERENCE FOR EXAMPLE TO WATER PROTECTION PLANS, MANAGEMENT PLANS OF THE RIVER BASIN DISTRICT, HYDROGEOLOGICAL PLANS, PLANS FOR FIGHTING DESERTIFICATION, RURAL DEVELOPMENT PROGRAMMES, LANDSCAPE AND SPATIAL PLANS, ETC: | SOFT | Short term (before 2020) | Regional programmes mentioned in the NAS | Regions | Y | WP3 – Technical and Methodological Approach – lead by CMCC AdBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts |
| 49 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROMOTION OF INCENTIVES FOR THE ADOPTION OF MORE SUSTAINABLE AGRICULTURAL PRACTICES (ALSO THROUGH THE SELECTION OF MORE SUITABLE SPECIES, AND NATURALISTIC ENGINEERING INTERVENTIONS WITH THE USE OF PLANT SPECIES THAT REQUIRE LITTLE WATER; | SOFT | Short term (before 2020) | 1) IRRIFRAME - IRRINET (Irrigation service) - At national level 2) Permanent observatory for water uses in the hydrographic district of the river Po 3) Platform FEWS/DEWS | 1) AMBI (ARPAE - Emilia Romagna Region) 2) Public bodies, policy makers and users (AdBPO) 3) Civil protection - Regions (AIPO - AdBPO) | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 51 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | INTEGRATION OF THE FIGHT AGAINST DESERTIFICATION IN DISTRICT MANAGEMENT PLANS OR WATER PROTECTION PLANS | SOFT | Short term (before 2020) | 1) River Basin Management plan (RBMP) 2) Po river Water balance plan (PBI) | AdBPO | Y | Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 52 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | CARRY OUT AN IN-DEPTH ASSESSMENT OF THE STATE OF SURFACE AND GROUNDWATER RESOURCES, IN PARTICULAR IN THE DRIEST AREAS OF THE COUNTRY; | SOFT | Short term (before 2020) | 1) IRRIFRAME - IRRINET (Irrigation service) - At national level 2) Permanent observatory for water uses in the hydrographic district of the river Po 3) Platform FEWS/DEWS | 1) AMBI (ARPAE - Emilia Romagna Region) 2) Public bodies, policy makers and users (AdBPO) 3) Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 54 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEVELOPMENT OF A SYSTEM FOR THE DISSEMINATION AND SHARING OF INFORMATION AT NATIONAL LEVEL | SOFT | Short term (before 2020) | National geoportal | ISPRA | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP3 – Technical and Methodological Approach – lead by CMCC SINACLOUD - Catrographic platform with climate indicators and risks at national level foreseen by the NAP and to be integreted by CLIMA PO Platform (WP3) |
| 55 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROMOTION OF DISSEMINATION AND APPLICATION OF LOCAL AND TRADITIONAL KNOWLEDGE OF SOIL AND WATER MANAGEMENT; | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP11 – Sustainability, Replication and Exploitation – lead by AdBPO |

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| 56 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROMOTION OF TRAINING, INFORMATION AND AWARENESS RAISING PROGRAMS | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 58 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | IMPROVEMENT OF KNOWLEDGE OF PHENOMENA: TRAINING, INFORMATION AND DISSEMINATION ACTIVITIES, PROMOTING TRANSPARENCY AND ACCESS TO INFORMATION | SOFT | Long term (Beyond 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 59 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | IDENTIFICATION OF SPECIFIC ADAPTATION ACTIONS FOR HOMOGENEOUS TERRITORIAL AREAS, ESSENTIALLY LINKED TO SUSTAINABLE AGRICULTURE AND THE DEFINITION OF SUSTAINABLE MANAGEMENT OF THE TERRITORY, AS WELL AS THE TECHNICAL MEASURES FOR THE MANAGEMENT OF ATER RESOURCES AND AGRICULTURE | SOFT | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 61 | HYDROGEOLOGICAL INSTABILITY | ENHANCEMENT OF ALERT SYSTEMS | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC |
| 62 | HYDROGEOLOGICAL INSTABILITY | ENHANCEMENT OF MONITORING ACTIVITIES | SOFT | Short term (before 2020) | FEWS Platform | Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 63 | HYDROGEOLOGICAL INSTABILITY | MONITORING SMALL BASINS | SOFT | Long term (Beyond 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 64 | HYDROGEOLOGICAL INSTABILITY | ENHANCEMENT OF THE LOCAL SUPERVISION IN THE OCCASION OF FLOODS | SOFT | Long term (Beyond 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 66 | HYDROGEOLOGICAL INSTABILITY | SYSTEMATIZING OF HISTORICAL INFORMATION; | SOFT | Long term (Beyond 2020) | Flood risk management plan (PGRA) | AdBPO | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 67 | HYDROGEOLOGICAL INSTABILITY | IMPROVEMENT OF METEO-CLIMATIC PREDICTIVE CAPABILITIES | SOFT | Long term (Beyond 2020) | FEWS-DEWS Platform | Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 68 | HYDROGEOLOGICAL INSTABILITY | IMPROVEMENT OF ALERT SYSTEMS (STANDARDISATION OF MESSAGES THROUGHOUT THE NATIONAL TERRITORY, MORE EFFECTIVE AND TIMELY COMMUNICATION, PREPARATION OF ADMINISTRATORS) AND RELATED CIVIL PROTECTION PLANS (DRAFTING, DISSEMINATION TO THE POPULATION, TESTS AT LOCAL LEVEL INVOLVING THE POPULATION); | SOFT | n.d. | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 69 | HYDROGEOLOGICAL INSTABILITY | IMPROVEMENT OF THE TERRITORIAL PLANNING STRATEGIES COORDINATION; | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 70 | HYDROGEOLOGICAL INSTABILITY | IMPROVEMENT OF THE COORDINATION OF THE SUBJECTS INVOLVED IN THE CONTROL OF THE TERRITORY; | SOFT | Long term (Beyond 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |

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| 71 | HYDROGEOLOGICAL INSTABILITY | "FLOOD PREPAREDNESS" TRAINING OF THE POPULATION; | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 72 | HYDROGEOLOGICAL INSTABILITY | CENSUS OF THE CRITICAL SITUATIONS OF THE RIVER NETWORK, WITH SPECIAL ATTENTION TO NARROWING AND DRAINS | SOFT | Short term (before 2020) | Flood risk management plan (PGRA) | AdBPO | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 73 | HYDROGEOLOGICAL INSTABILITY | CENSUS OF PUBLIC BUILDINGS EXPOSED TO HYDROGEOLOGICAL RISK; | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 74 | HYDROGEOLOGICAL INSTABILITY | IMPLEMENTATION OF HYDROGEOLOGICAL RISK MITIGATION SYSTEMS THROUGH INSURANCE; | SOFT | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 76 | HYDROGEOLOGICAL INSTABILITY | PROVIDE FOR A CHANGE IN THE PRACTICE OF EX-POST COMPENSATION TOWARDS AN INSURANCE POLICY AND RELATED LEGISLATION THAT ALSO GUARANTEES ECONOMIC REPERCUSSIONS TO SUPPORT PREVENTION; | SOFT | n.d. | | | N | |
| 77 | HYDROGEOLOGICAL INSTABILITY | ENSURING EFFECTIVE CONTINUOUS RISK COMMUNICATION ACTIONS, AIMED AT THE POPULATION AND ADMINISTRATORS, TO REDUCE THE IMPACTS OF WATER-METEOROLOGICAL EVENTS AND SPREAD AWARENESS OF THE "RESIDUAL RISK" | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO RER (partner), ARPAE (lead partner), UNIBO (partner) - ADRIACLIM - Promotion of new and update of existing adaptation plans at local and Regional level NRRP - Integration of complementary funds through the NRRP instrument |
| 101 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | PROMOTE THE ADOPTION OF SCIENTIFIC SYSTEMS TO SUPPORT DECISIONS | SOFT | Short term (before 2020) | | | Y | Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 103 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | INTEGRATE THE PLANNING OF THE WATER BASIN WITH THOSE OF THE COASTAL AREA | SOFT | Short term (before 2020) | River Basin Management plan (RBMP) | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 104 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | INTEGRATE SECTOR PLANS AND PROGRAMS IN ORDER TO ACHIEVE THE FOLLOWING: THE SUSTAINABLE USE OF WATER RESOURCES, THE REDUCTION OF THE CONSUMPTION OF NATURAL AND AGRICULTURAL SOILS, THE RECOVERY AND ENVIRONMENTAL ENHANCEMENT OF MARGINAL AREAS IN THE AGRICULTURAL SYSTEM, THE CONSERVATION OF ECOLOGY AND THE RESTORATION OF THE ECOLOGICAL INTEGRITY OF THE SHELTER AREAS THAT WORK AS A BUFFER BETWEEN AQUATIC AND TERRESTRIAL ECOSYSTEMS | SOFT | Short term (before 2020) | 1) Drought management plan (PBI, Allegato 3) 2) River Basin Management plan (RBMP) | AdBPO | Y | All project actions contribute to the implementation of this action proposal |
| 105 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | PROMOTE THE CONCEPT OF ADAPTIVE MANAGEMENT | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP11 – Sustainability, Replication and Exploitation – lead by AdBPO |

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| 106 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | START PROGRAMS OF EARLY WARNING AND MONITORING OF ACTIONS, ALSO WITH THE AID OF NEW TECHNOLOGIES | SOFT | Short term (before 2020) | FEWS-DEWS Platform | Civil protection - Regions (AIPO - AdBPO) | Y | WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC |
| 107 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | CONSOLIDATE LONG-TERM MONITORING FOR UNDERSTANDING NATURAL CYCLES AND ALTERATIONS INDUCED BY ANTHROPIC ACTIVITIES AND CLIMATE CHANGE | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 108 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | START A CONSCIOUS PARTICIPATION OF STAKEHOLDERS, CITIZENS AND DECISION MAKERS IN STRATEGIC CHOICES FOR THE PROTECTION OF THE ENVIRONMENT, AS CONDITIONS THAT WILL ENSURE A LASTING ECONOMIC DEVELOPMENT AND A GOOD QUALITY OF LIFE | SOFT | Short term (before 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP3 – Technical and Methodological Approach – lead by CMCC WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 109 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REGULATION OF THE CONCESSIONS AND USES OF WATER IN VIEW OF THE ECOSYSTEM MANAGEMENT OF THE WATER RESOURCE TO BE ADOPTED AS PART OF THE WATER BALANCE PLAN OF THE HYDROGRAPHIC DISTRICT | SOFT | Short term (before 2020) | 1) Po river Water balance plan (PBI) 2) River Basin Management plan (RBMP) | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 110 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REVIEW AND REMODULATION OF THE REGULATORY INSTRUMENTS THAT GOVERN THE MINIMUM VITAL OUTFLOW FOR THE PURPOSE OF THE INTRODUCTION OF ECOLOGICAL OUTFLOWS IN RELATION TO THE EXPECTED CLIMATIC SCENARIOS | SOFT | Short term (before 2020) | AdBPO Directive on minimum vital water flow – according to national regulation | AdBPO | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 111 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | PROTECTION OF AREAS OF LANDSCAPE EXCELLENCE AND CONSERVATION INTEREST, TO BE IMPLEMENTED BOTH THROUGH THE MANAGEMENT TOOLS OF THE NATURA 2000 NETWORK AND WITH THE ACTIONS PROVIDED FOR, FOR EXAMPLE, THE NEW CAP | SOFT | Short term (before 2020) | River Basin Management plan (RBMP) | AdBPO | Y | |
| 112 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | START OF GREENING ACTIONS IN THE SCOPE OF THE NEW CAP 2014-2020 WITH THE OBJECTIVE OF ENHANCING AND EXPLOITING THE ECOSYSTEM REGULATION SERVICES (FOR EXAMPLE REMOVAL OF POLLUTANTS) | SOFT | Short term (before 2020) | | | N | |
| 114 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | ADOPT A PLANNING CHARACTERIZED BY PREVENTIVE ACTIONS IN THE CATCHMENT AREA OF THE LAKE TO REDUCE NUTRIENT LOADS | SOFT | Long term (Beyond 2020) | | | N | |
| 115 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | COORDINATED MANAGEMENT BETWEEN THE MANAGERS OF THE MOUNTAIN BASINS, THE LAKE REGULATION CONSORTIA AND THE RECLAMATION CONSORTIA UNDER THE DIRECTION OF THE COMPETENT BASIN / DISTRICT AUTHORITIES | SOFT | Long term (Beyond 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |

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| 119 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | LAND MANAGEMENT AIMED AT REDUCING THE LOSS OF HABITAT AND SPECIES TO A PHYSIOLOGICAL MINIMUM | SOFT | Long term (Beyond 2020) | | | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF AIPO - Natural-based solution to mitigate flood risk due to sand boils reactivations along the Po River RLombardia NRRP – flood risk mitigation and prevention: 14. Re-naturalization of the right bank of the Lambro river upstream of the hydraulic power unit in via Monte Santo / E. Fermi in the municipality of Monza |
| 120 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REGULATORY ACTIONS AIMED AT ESTABLISHING CRITERIA FOR IDENTIFYING TERRESTRIAL ECOSYSTEMS DEPENDING ON UNDERGROUND WATERS, TRENDS OF INCREASE IN POLLUTANTS CONCENTRATIONS AND / OR QUANTITATIVE ALTERATIONS AND THE POSSIBLE INVERSION TAKING INTO ACCOUNT POSSIBLE NEGATIVE EFFECTS ON ASSOCIATED AQUATIC ECOSYSTEMS OR TERRESTRIAL ECOSYSTEMS DEPENDING ON UNDERGROUND AQUATIC ENVIRONMENTS | SOFT | Short term (before 2020) | 1) River Basin Management plan (RBMP) 2) National Regulation – L.Decree 152/2006 and subsequent amendments and additions 3) Guidelines ISPRA | 1) AdBPO 2) Regions 3) ISPRA | Y | |
| 121 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REDUCTION AND CONTROL OF THE CONTAMINANTS AND NUTRIENTS FROM DIFFERENT SOURCES (AGRICULTURE, INDUSTRY, URBAN CENTERS ETC) | SOFT | Short term (before 2020) | River Basin Management plan (RBMP) | AdBPO | Y | |
| 127 | AGRICULTURE AND FOOD PRODUCTION | ORGANIZE AND SPREAD EXISTING KNOWLEDGE AND DATA ON CLIMATE CHANGE IN AGRICULTURE | SOFT | Short term (before 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 128 | AGRICULTURE AND FOOD PRODUCTION | IDENTIFY THE MOST VULNERABLE AREAS (ATLAS OF AGRO-CLIMATIC AREAS WITH DIFFERENT CLIMATE CHANGE SCENARIOS); | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC SINACLOUD - Cartographic platform with climate indicators and risks at national level foreseen by the NAP and to be integrated by CLIMA PO Platform (WP3) |
| 129 | AGRICULTURE AND FOOD PRODUCTION | DEVELOP DECISION SUPPORT SYSTEMS (EARLY WARNING SYSTEMS FOR RISKS OF PHYTOPATHIES AND PATHOGENIC ATTACKS, FLOODS AND OTHER EXTREME EVENTS), SYSTEMS TO SUPPORT DECISIONS IN THE MID TERM, MONTHLY AND IN THE SEASONAL PERIOD) | SOFT | Short term (before 2020) | FEWS-DEWS Platform | AIPO e Civil protection (ARPA - AdBPO) | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC |
| 131 | AGRICULTURE AND FOOD PRODUCTION | ENSURE VERTICAL INTEGRATION (IN THE DIFFERENT LEVELS OF GOVERNANCE) AND HORIZONTAL INTEGRATION WITH OTHER POLICIES, AVOIDING OVERLAPS; | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 132 | AGRICULTURE AND FOOD PRODUCTION | STRENGTHENING CAPACITY TO ADAPT THROUGH AWARENESS RAISING AND COMMUNICATION OF AVAILABLE INFORMATION ON CLIMATE CHANGE | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO EAFRD interreg TEACHER - toolbox for climate indicators |

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| 133 | AGRICULTURE AND FOOD PRODUCTION | CREATE INFORMATION EXCHANGE SYSTEMS ON THE EXISTENCE OF GOOD PRACTICES | SOFT | Short term (before 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 135 | AGRICULTURE AND FOOD PRODUCTION | TARGETED SUPPORT FOR RESEARCH TO DEFINE ALTERNATIVE SOLUTIONS IN TERMS OF CROP VARIETIES, AGRICULTURAL PRACTICES AIMED AT REDUCING WATER DEMAND AND DEFINITION OF AGRICULTURAL POLICIES; | SOFT | n.d. | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP11 – Sustainability, Replication and Exploitation – lead by AdBPO |
| 140 | AGRICULTURE AND FOOD PRODUCTION | CREATE INFORMATION EXCHANGE SYSTEMS AND ADOPTION OF GOOD PRACTICES ALSO THROUGH THE USE OF THE TOOLS PROVIDED BY THE NATIONAL ACTION PLAN (NAP). | SOFT | n.d. | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 142 | AGRICULTURE AND FOOD PRODUCTION | PROMOTE AND IMPLEMENT A MORE PRUDENT COST/BENEFIT ANALYSIS; | SOFT | Short term (before 2020) | | | Y | Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 145 | AGRICULTURE AND FOOD PRODUCTION | IRRIGATION PLANNED ON THE BASIS OF ACTUAL IRRIGATION NEEDS ESTIMATED BY APPROPRIATE TECHNICAL ASSISTANCE SERVICES | SOFT | Short term (before 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 146 | AGRICULTURE AND FOOD PRODUCTION | INVESTMENTS IN HUMAN CAPITAL FOR THE IMPROVEMENT OF WATER MANAGEMENT IN THE IRRIGATION AREAS WHICH REFER TO WATER SUPPLY INFRASTRUCTURE | SOFT | Short term (before 2020) | | | Y | Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 147 | AGRICULTURE AND FOOD PRODUCTION | ADOPTION OF PROACTIVE ATTITUDES (E.G. WARNING SYSTEMS, DEFINITION OF PREVENTION PLANS AND PROGRAMS, ETC.). | SOFT | n.d. | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 159 | COASTAL AREAS | UNDERTAKE PRELIMINARY ANALYSIS ACTIONS TO DEFINE THE SPECIFIC ADAPTATION MEASURES IN COASTAL ZONES (ANALYSIS OF DANGER AND VULNERABILITY TO EXTREME EVENTS, IDENTIFICATION OF THE MOST SENSITIVE RECEPTORS, RISK MAPS, MULTI-RISK ANALYSIS) | SOFT | Short term (before 2020) | | | Y | Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC AdBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis RER – Rural Development Plan |
| 160 | URBAN SETTLEMENTS | INTEGRATE VULNERABILITY ASSESSMENT ACTIVITIES AND ADAPTATION MEASURES INTO THE CONSOLIDATED PLANNING PROCEDURES (URBAN PLANNING, WATER RESOURCES, COASTAL SYSTEM PROTECTION, CIVIL PROTECTION) AT THE LEVEL OF ITALIAN MUNICIPALITIES | SOFT | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF RER (partner), ARPAE (lead partner), UNIBO (partner) - ADRIACLIM - Promotion of new and update of existing adaptation plans at local and Regional level NRRP - Integration of complementary funds through the NRRP instrument |
| 161 | URBAN SETTLEMENTS | INTEGRATE THE KNOWLEDGE OF SPECIFIC SENSITIVITIES AT LOCAL LEVEL AND THE ABILITY TO PLAN ADAPTATION MEASURES, IN PART ALREADY PRESENT IN ITALIAN MUNICIPALITIES, WITH SCIENTIFIC KNOWLEDGE ON EXPOSURE TO EXPECTED IMPACTS AT NATIONAL LEVEL | SOFT | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO RER (partner), ARPAE (lead partner), UNIBO (partner) - ADRIACLIM - Promotion of new and update of existing adaptation plans at local and Regional level NRRP - Integration of complementary funds through the NRRP instrument |

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| 162 | URBAN SETTLEMENTS | PROMOTE URBAN POLICIES NECESSARY TO REDUCE VULNERABILITY AND INCREASE THE ABILITY TO RESPOND TO THE IMPACTS OF CLIMATE CHANGE, WHICH IN MANY CASES ARE ABLE TO PRODUCE SYNERGIC EFFECTS (ADAPTATION OF THE INFRASTRUCTURE NETWORK, REVIEW OF WATER SUPPLY POLICIES IN RELATION TO THE RISKS OF OVER-USE OF THE COASTAL GROUNDWATER, LIMITATIONS WITH RESPECT TO THE AREAS TO BE URBANIZED,) | SOFT | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 201 | URBAN SETTLEMENTS | PROMOTE URBAN ADAPTATION STRATEGIES AND PLANS, IN THE CONTEXT OF THE MAYORS ADAPT INITIATIVE PROMOTED BY THE EC (THE COVENANT OF MAYORS INITIATIVE ON ADAPTATION TO CLIMATE CHANGE), FAVOURING THE COORDINATING ROLE OF THE MINISTRY OF THE ENVIRONMENT AND THE PROTECTION OF LAND AND SEA, REGIONS AND PROVINCES; | SOFT | Short term (before 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 202 | URBAN SETTLEMENTS | PROMOTE, FOLLOWING THE EUROPEAN MODEL OF THE CLIMATE-ADAPT PLATFORM, THE EXCHANGE OF EXPERIENCES AND THE DISSEMINATION OF BEST PRACTICES, ENHANCING AND NETWORKING THE ADAPTATION PATHS LAUNCHED IN SOME NATIONAL CONTEXT AS WELL AS THE EXISTING DATABASES AT NATIONAL LEVEL; | SOFT | Short term (before 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 203 | URBAN SETTLEMENTS | VERIFY THE EXISTING FORECAST OF THE TERRITORIAL GOVERNANCE INSTRUMENTS IN ORDER TO RECONSIDER AND CHANGE SETTLEMENT AND INFRASTRUCTURAL FORECAST PREDICTABLY EXPOSED TO CLIMATE IMPACTS; | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 204 | URBAN SETTLEMENTS | INTEGRATE THE REGULATION OF URBAN TRANSFORMATION ACTS AND THE MANAGEMENT OF EXISTING SETTLEMENTS ACTS BY ESTABLISHING ENERGY STANDARDS FOR THE BUILT ENVIRONMENT AND FOR PUBLIC SPACES AND MEASURES AIMED AT REDUCING THE CONSUMPTION OF NEW LAND. INTRODUCTION OF CLIMATE STANDARDS REGARDING THE USE OF MATERIALS THAT LIMIT THE HEAT ABSORPTION OF BUILDINGS AND THE WATERPROOFING OF SOILS; FORMS OF RETENTION AND REUSE OF RAINWATER THAT INCREASE THE GREEN ENDOWMENTS; | SOFT | Short term (before 2020) | 1) SECAPs (Covenant of Mayors) 2) Regional adaptation plans 3) CAM | Local governments e Regions | Y | |

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| 205 | URBAN SETTLEMENTS | DEVELOP GUIDELINES FOR CLIMATE ADAPTATION AT LOCAL SCALE | SOFT | Short and Long term (Beyond 2020) | 1) SECAPs (Covenant of Mayors) 2) Regional adaptation plans | Local governments e Regions | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO WP11 – Sustainability, Replication and Exploitation – lead by AdBPO Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PolITO Task 6.1 - Nature-based solutions for riparian area management – lead by PolITO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF EAFRD interreg TEACHER - toolbox for climate indicators |
| 206 | URBAN SETTLEMENTS | INCREASE THE AWARENESS OF CITIZENS, COMPANIES AND STAKEHOLDERS ABOUT THE RISKS ARISING FROM CLIMATE CHANGE, FACILITATING THEIR ACTIVE PARTICIPATION IN THE ADAPTATION ACTIONS AND PREPARING WARNING SYSTEMS IN THE AREAS AT HIGHER RISK | SOFT | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 208 | URBAN SETTLEMENTS | SUPPORT AIR QUALITY REMEDIATION POLICIES AND INTERVENTIONS THAT LEAD TO BENEFITS IN TERMS OF ADAPTATION; | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 209 | URBAN SETTLEMENTS | PROMOTE A REDISTRIBUTION OF URBAN GREEN WITH THE FUNCTION OF INTERRUPTING THE HEAT ISLAND EFFECT. | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 266 | ENERGY | SUPPORT THE AGREEMENTS AND CONCERTED ACTIONS BETWEEN THE STAKEHOLDERS IN THE MANAGEMENT OF WATER AND RESERVOIRS (BASIN AUTHORITIES, FARMERS AND THEIR PRODUCERS) THROUGH MODELING TOOLS | SOFT | n.d. | Permanent observatory for water uses in the hydrographic district of the river Po | Public bodies, policy makers and users (AdBPO) | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 268 | ENERGY | STORE, IN ORDINARY MANAGEMENT, GREATER VOLUMES OF WATER IN THE STORAGE TANKS TO FACE THE INCREASING VARIABILITY OF THE PRECIPITATIONS AND, CONSEQUENTLY, OF THE WATER AVAILABILITY | SOFT | n.d. | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 270 | ALPINE AREA AND APENNINES | PROMOTE THE SYSTEM OF GLOBAL UNDERSTANDING OF IMPACTS AND OPPORTUNITIES IN MOUNTAIN WATER MANAGEMENT, INCREASING EFFORTS IN RESEARCH AND COLLABORATION BETWEEN MOUNTAIN REGIONS TO DEVELOP SUITABLE ACTIONS TO CONTAIN / REDUCE HYDRO-MORPHOLOGICAL ALTERATIONS | SOFT | Short term (before 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 271 | ALPINE AREA AND APENNINES | EXTEND AND STRENGTHEN THE ALREADY EXISTING NEGOTIATION TOOLS, PARTICIPATIVE PATHS, AND WATER PROTECTION AND MANAGEMENT TOOLS AVAILABLE AT NATIONAL LEVEL AND SPECIFICALLY IN MOUNTAIN AREAS | SOFT | Short term (before 2020) | River Basin Management plan (RBMP - river contracts) | AdBPO | Y | AdBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts |
| 272 | ALPINE AREA AND APENNINES | IDENTIFY AND STUDY THE VULNERABILITY OF ALPINE SOURCES TO CLIMATE CHANGE | SOFT | n.d. | | | N | |

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| 274 | ALPINE AREA AND APENNINES | EXTEND THE CURRENT TOOLS FOR MONITORING AND CONTROL OF THE QUALITY OF WATER RESOURCES TO EXPAND THE DETAILED CHARACTERIZATION OF MOUNTAIN WATERS AND INTENSIFY THE CURRENT SURVEILLANCE SYSTEMS, IN ADDITION TO ENSURING THE MONITORING AND IN-DEPTH EVALUATION OF LOCAL VULNERABILITY TO NATURAL RISK | SOFT | Short term (before 2020) | 1) River Basin Management plan (RBMP) 2) Water use and protection Plan (PTUA) | AdBPO e Regions | Y | Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO RLombardia - Regional funds for environmental protection |
| 275 | ALPINE AREA AND APENNINES | STRENGTHENING AND REVIEWING THE CURRENT LEVEL REGULATION SYSTEMS OF LAKES AND MOUNTAIN RESERVOIRS TO ENSURE GREATER PROTECTION AND ADAPTATION TO CURRENT AND FUTURE CLIMATE CHANGES | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 276 | ALPINE AREA AND APENNINES | ENSURING AND ENHANCING A HIGH DEGREE OF CITIZENS AND INSTITUTIONAL AWARENESS AND SENSITIVITY IN THE SUSTAINABLE MANAGEMENT AND RATIONAL AND OPTIMAL USE OF WATER RESOURCES | SOFT | Short term (before 2020) | | | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 277 | ALPINE AREA AND APENNINES | IDENTIFICATION OF MEASURES / EMERGENCY PLANS, REDUCTION AND RESTRICTION OF CONSUMPTION BY SECTORS IN THE EVENT OF SERIOUS DROUGHT AND RESIZING OF THE WARNING SYSTEM IN ANTICIPATION OF MORE FREQUENT SITUATIONS OF WATER SCARCITY | SOFT | Short term (before 2020) | 1) Permanent observatory for water uses in the hydrographic district of the river Po 2) FEWS-DEWS Platform | 1) Public bodies, policy makers and users (AdBPO) 2) Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 278 | ALPINE AREA AND APENNINES | INTENSIFY RESEARCH AND EFFORTS TO REDUCE UNCERTAINTIES ABOUT THE IMPACTS OF CLIMATE CHANGE ON ECOSYSTEMS AND BIODIVERSITY, IDENTIFYING KNOWLEDGE GAPS AND ENCOURAGING THE PROCESS OF DATA SHARING | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 286 | ALPINE AREA AND APENNINES | STRENGTHEN EXISTING LONG-TERM ECOLOGICAL MONITORING NETWORKS | SOFT | Long term (Beyond 2020) | 1) River Basin Management plan (RBMP) 2) Water use and protection Plan (PTUA) | 1) AdBPO 2) Regions | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |
| 290 | ALPINE AREA AND APENNINES | INTEGRATE ADAPTATION IN TERRITORIAL PLANNING | SOFT | Short term (before 2020) | 1) SECAPs (Covenant of Mayors) 2) Regional adaptation plans | Local governments e Regions | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF RER (partner), ARPAE (lead partner), UNIBO (partner) - ADRIACLIM - Promotion of new and update of existing adaptation plans at local and Regional level NRRP - Integration of complementary funds through the NRRP instrument |
| 291 | ALPINE AREA AND APENNINES | ADAPT THE CURRENT ALERT, PRE-ALERT AND EMERGENCY MANAGEMENT TOOLS, IN VIEW OF THE INCREASING FREQUENCY OF DANGEROUS HYDROGEOLOGICAL EVENTS | SOFT | Short term (before 2020) | FEWS-DEWS Platform | Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE |
| 293 | ALPINE AREA AND APENNINES | STRENGTHEN THE CURRENT NETWORK FOR MONITORING AND ASSESSMENT OF NATURAL RISKS AND EXTREME EVENTS IN TERRITORIAL PLANNING, CONSIDER ALL NATURAL RISKS WITHIN A DEFINED AREA | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |

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| 294 | ALPINE AREA AND APENNINES | IMPROVING THE BASES FOR THE EVALUATION OF PROCESSES RELATED TO NATURAL HAZARDS AND THE EFFECTIVENESS OF ADAPTATION MEASURES TO CLIMATE CHANGE, IN COOPERATION WITH THE COUNTRIES OF THE ALPINE REGION, ENSURING THE HARMONIZATION AND TRANSPARENT SHARING OF MONITORING DATA, TERMINOLOGY AND METHODOLOGIES FOR CALCULATING INTEGRATED RISK, AS WELL AS ENSURING THE EXCHANGE OF EXPERIENCES AND GOOD PRACTICES | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO AdBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis |
| 295 | ALPINE AREA AND APENNINES | USE RISK MANAGEMENT TOOLS TO INVESTIGATE THE SOCIAL AND ECONOMIC CONSEQUENCES OF DIFFERENT ADAPTATION MEASURES | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 296 | ALPINE AREA AND APENNINES | ENSURING THE INTEGRATION AND ASSIMILATION OF THE RESULTS OF CLIMATE PROJECTIONS IN HYDROGEOLOGICAL AND GEOMORPHOLOGICAL MODELS TO IMPROVE THE STATE OF KNOWLEDGE ON THE MECHANISMS OF TRANSMISSION OF THE EFFECTS OF CLIMATE CHANGE ON THE INCREASE IN INTENSITY AND FREQUENCY OF NATURAL RISKS PREVAILING IN MOUNTAIN AREAS | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 298 | ALPINE AREA AND APENNINES | ADAPT THE CURRENT EMERGENCY SYSTEMS FOR ALERT AND PRE-ALERT OF NATURAL RISKS, THROUGH THE NETWORKING AND SUPPORT OF EXISTING MONITORING ACTIVITIES | SOFT | Short term (before 2020) | 1) Unified Coordination Group on floods (UCG – Piene) 2) Unified Coordination Group on drought (UCG – Magre) | Civil protection - Regions (AIPO - AdBPO) | Y | |
| 314 | ALPINE AREA AND APENNINES | STRENGTHEN EXPERIENCES AND "GOOD PRACTICE" EXCHANGE BETWEEN REGIONS AND BORDER COUNTRIES | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 316 | ALPINE AREA AND APENNINES | STRENGTHEN THE CURRENT MONITORING AND FORECASTING SYSTEMS | SOFT | Short term (before 2020) | 1) Unified Coordination Group on floods (UCG – Piene) 2) Unified Coordination Group on drought (UCG – Magre) | Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 325 | ALPINE AREA AND APENNINES | ENHANCE, ACCORDING TO THE TYPE OF RISK, THE APPLICATION OF EXISTING ALERT SYSTEMS IN ADDITION TO HEAT WAVES, ALSO TO OTHER MOUNTAIN RISKS RELATED TO CLIMATE CHANGE FLASH RIVER FLOODS EMERGENCIES, LANDSLIDES, AVALANCHE AND GLACIAL RISKS) | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC |
| 328 | ALPINE AREA AND APENNINES | REDUCE UNCERTAINTIES ABOUT THE MAIN RISKS, POSSIBLE IMPACTS AND FUTURE PRESSURES IN RELATION TO WEATHER FLOWS AND THE AVAILABILITY OF WATER RESOURCES | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 334 | ALPINE AREA AND APENNINES | ENSURING THE INTEGRATION OF THE ADAPTATION PROCESS OF THE MOUNTAIN AGRICULTURAL SECTOR IN THE PROGRAMMATIC AND FINANCIAL INSTRUMENTS OF THE COMMON AGRICULTURAL POLICY | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |

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| 343 | ALPINE AREA AND APENNINES | ENCOURAGE INFORMATION AND PUBLIC AWARENESS CAMPAIGNS TO INCREASE CITIZENS AWARENESS ABOUT ENERGY PROBLEMS AND PROMOTE THE REDUCTION OF CONSUMPTION | SOFT | Short term (before 2020) | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 346 | PO RIVER HYDROGRAPHIC DISTRICT | UPDATING OF WATER DIVERSION CONCESSIONS ON THE BASIS OF NEEDS AND WATER AVAILABILITY AND REVIEW OF THE AUTHORIZATION REGIME | SOFT | Short and Long term (Beyond 2020) | Po river Water balance plan | AdBPO | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 347 | PO RIVER HYDROGRAPHIC DISTRICT | IMPLEMENTATION OF DIRECTIVE 2000/60/CE ESTABLISHING A FRAMEWORK FOR COMMUNITY ACTION IN THE FIELD OF WATER POLICY | SOFT | Short and Long term (Beyond 2020) | | | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP3 – Technical and Methodological Approach – lead by CMCC |
| 348 | PO RIVER HYDROGRAPHIC DISTRICT | IMPLEMENTATION OF THE RULES REGARDING HYDRAULIC AND HYDROLOGICAL INVARIANCE | SOFT | Short term (before 2020) | Flood risk management plan (PGRA) | AdBPO | Y | Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO |
| 349 | PO RIVER HYDROGRAPHIC DISTRICT | ORGANIZATIONAL STRENGTHENING OF THE BODIES IN CHARGE OF MANAGEMENT AND CONTROL | SOFT | Short term (before 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 350 | PO RIVER HYDROGRAPHIC DISTRICT | ENHANCEMENT OF THE STAKEHOLDERS PARTICIPATION COMPONENT IN THE MANAGEMENT OF THE WATER RESOURCES, THROUGH THE ESTABLISHMENT OF THE PERMANENT USERS COMMITTEE OR "WATER PARLIAMENT" | SOFT | Long term (Beyond 2020) | Permanent observatory for water uses in the hydrographic district of the river Po | Public bodies, policy makers and users (AdBPO) | Y | |
| 351 | PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF AN ADEQUATE SELF-FINANCING CAPACITY FOR THE IMPLEMENTATION OF THE ADAPTATION INTERVENTIONS ENVISAGED IN THE RIVER BASIN PLANNING, ALSO THROUGH THE USE OF ECONOMIC INSTRUMENTS | SOFT | Long term (Beyond 2020) | | | Y | Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 352 | PO RIVER HYDROGRAPHIC DISTRICT | COORDINATION OF TERRITORIAL PLANNING TOOLS THROUGH THE MANAGEMENT PLANS OF THE WATER DISTRICTS | SOFT | Long term (Beyond 2020) | 1) River Basin Management plan (RBMP) 2) Flood risk management plan (PGRA) | AdBPO | Y | AdBPO – 14 National budget -Planning integration; strengthening of institutional cooperation, training and public participation - activation and implementation of river, lake, humid area, and delta contracts |
| 353 | PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF BASIN AND SUB-BASIN WATER BALANCES FOR THE PURPOSE OF VERIFYING CURRENT AND FUTURE NEEDS AND AVAILABILITY | SOFT | Short term (before 2020) | Po river Water balance plan (PBI) | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 354 | PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF MONITORING AND QUANTITATIVE-QUANTITATIVE MODELING OF WATER RESOURCES FOR THE PURPOSE OF CONTROL AND DEVELOPMENT OF AVAILABILITY FORECASTS AND PROJECTIONS | SOFT | Short term (before 2020) | Drought Modelling system update (GCU) | Civil protection - Regions (AIPO - AdBPO) | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI |
| 355 | PO RIVER HYDROGRAPHIC DISTRICT | OPTIMIZED USE OF ECONOMIC INSTRUMENTS IN THE INTEGRATED MANAGEMENT OF WATER RESOURCES, SUCH AS THE REVIEW OF WATER RATES, REVIEW OF WITHDRAWAL FEES AND CONCESSIONS, ABOLITION OF FLAT RATES | SOFT | Short term (before 2020) | | | N | |
| 356 | PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF GUIDELINES, SUCH AS STANDARDS IN TECHNOLOGICAL AND WATER DISTRIBUTION SYSTEMS IN ALL PRODUCTION SECTORS | SOFT | Long term (Beyond 2020) | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 357 | PO RIVER HYDROGRAPHIC DISTRICT | INTEGRATION OF DISTRIBUTION NETWORKS AND INTRODUCTION OF MECHANISMS FOR THE TEMPORARY TRANSFER OF WITHDRAWAL CONCESSIONS; | SOFT | Long term (Beyond 2020) | | AdBPO | Y | |

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| 358 | PO RIVER HYDROGRAPHIC DISTRICT | FORESEE THE REALIZATION OF MINI-ENERGY PRODUCTIONS BY EXPLOITING THE MINOR IRRIGATION NETWORK (IRRIGATION CANALS) FOR SELF-FINANCING MAINTENANCE INTERVENTIONS; | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 359 | PO RIVER HYDROGRAPHIC DISTRICT | USE THE MULTIFUNCTIONALITY OF THE NETWORK OF IRRIGATION CHANNELS OF THE PO RIVER BASIN (ELECTRICITY PRODUCTION, ECOLOGICAL NETWORK, ECO-TOURISM) | SOFT | n.d. | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |
| 360 | PO RIVER HYDROGRAPHIC DISTRICT | TAKING INTO ACCOUNT THE CLIMATE CHANGE ADPTATION SCENARIOS IN THE MANAGEMENT OF WATER RESOURCES, AT ALL LEVELS OF PLANNING AND WITH REFERENCE TO THE SECTORS THAT DEPEND AND SIGNIFICANTLY IMPACT ON WATER RESOURCES | SOFT | Short term (before 2020) | 1) River Basin Management plan (RBMP) 2) Flood risk management plan (PGRA) | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 361 | PO RIVER HYDROGRAPHIC DISTRICT | ENHANCEMENT OF FLOODS AND LOW WATER RIVER SERVICES (SURVEILLANCE, MONITORING, ALERT, STRUCTURAL AND NON-STRUCTURAL ACTIONS) BY REGIONAL AGENCIES FOR THE PROTECTION OF THE ENVIRONMENT, CIVIL PROTECTION AND TERRITORIAL PRESIDIA | SOFT | Short term (before 2020) | FEWS-DEWS Platform | Civil protection - Regions (AIPO - AdBPO) | Y | Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC |
| 362 | PO RIVER HYDROGRAPHIC DISTRICT | DRAFTING AND IMPLEMENTATION OF THE WATER EMERGENCY MANAGEMENT PLANS, SUCH AS THE DROUGHT MANAGEMENT PLAN AND THE FLOOD RISK MANAGEMENT PLAN | SOFT | Short term (before 2020) | 1) Drought management plan (PBI, Allegato 3 - Direttiva Magre) 2) Flood risk management plan (PGRA) | AdBPO | Y | |
| 363 | PO RIVER HYDROGRAPHIC DISTRICT | DEVELOPMENT OF RISK REDISTRIBUTION MECHANISMS SUCH AS SOLIDARITY FUNDS AND INSURANCE INSTRUMENTS | SOFT | Long term (Beyond 2020) | | | N | |
| 364 | WATER RESOURCES | REDEVELOPMENT OF WATER COURSES IN CONSIDERATION OF THE MAINTENANCE OF VITAL FLOWS AND / OR ECOLOGICAL FLOWS AND ECOLOGICAL QUALITY IN SITUATIONS OF VARIATIONS OF FUTURE THERMAL-RAIN SYSTEMS | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | AdBPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches RLombardia – Regional budget - floud risk mitigation and prevention |
| 365 | WATER RESOURCES | SYSTEMATIC INTRODUCTION OF MINIMUM VITAL FLOW (MVF), OR ECOLOGICAL FLOW, INTO THE PLANS AND IN MANAGEMENT PRACTICES ALSO CONSIDERING THE EXPECTED CHANGES DUE TO CLIMATIC CONDITIONS AND OUTFLOWS | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | AdBPO Directive on minimum vital water flow – according to national regulation | AdBPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 366 | WATER RESOURCES | CREATION OF BUFFER AREAS BETWEEN CULTIVATED AREAS AND WATER COURSES | GREEN (ECOSYSTEM APPROACH) | n.d. | River Basin Management plan (RBMP) | AdBPO | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO |
| 367 | WATER RESOURCES | PROTECTION AND CONSERVATION OF WOOD AREAS S AND COASTAL VEGETATION | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | RLombardia NRRP – flood risk mitigation and prevention: Measures 1 - 3 - 6 - 7 - 9 - 10 - 11 - 12 - 13 - 14 |
| 368 | WATER RESOURCES | PROTECTION AND ENHANCEMENT OF AQUIFERS, INCLUDING ARTIFICIAL REFILLING INTERVENTIONS | GREEN (ECOSYSTEM APPROACH) | n.d. | River Basin Management plan (RBMP) | AdBPO | Y | |

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| 369 | WATER RESOURCES | IMPROVEMENT OF SOILS WATER RETENTION CAPACITY | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 370 | WATER RESOURCES | MAINTENANCE / RESTORATION OF CONDITIONS FAVORABLE TO THE NATURAL RECHARGE OF THE GROUNDWATERS (ECOLOGICAL OUTFLOWS AND SIDE CONNECTIVITY) | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC |
| 371 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | ADOPTION OF "MORE SIMPLIFIED" GROUND WORKING COMPARED TO TRADITIONAL DEEP PLOWING | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 373 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROMOTION OF THE USE OF HEDGES TO DIVIDE THE DIFFERENT CULTIVATED AREAS AND AT THE SAME TIME ACT AS BARRIERS FOR THE ABSORPTION OF CHEMICALS USED IN AGRICULTURE (PLANT PROTECTION PRODUCTS, FERTILIZERS) WHOSE DIFFUSION OUTSIDE THE AREA IS THEREFORE LIMITED; | SOFT | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |
| 374 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROTECTION OF RIPARIAN ZONES CONTROL OF SANCTIONS OF ABUSIVE DISCHARGE IN WATER COURSES | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO |
| 375 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROTECTION AND RESTORATION OF WET ZONES TO CONTRAST THE PHENOMENON OF SALINIZATION OF SOILS AND GROUNDWATER IN COASTAL AREAS | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | River Basin Management plan (RBMP) | AdbPO | Y | |
| 376 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | CROPS ROTATION | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 379 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | FORESTATION OF DEGRADED LAND SUBJECT TO EROSION AND WIDESPREAD RENATURALIZATION INTERVENTIONS IN ORDER TO REDUCE LAND DEGRADATION; | SOFT | Long term (Beyond 2020) | | | Y | AdbPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches AdbPO - NRRP - Renaturation of the Po river - 2: Reactivation and reopening of abandoned oxbows and branches RPiemonte – Regional Balance - Green Infrastructures for water bodies RER - Reforestation project “Mettiamo radici per il future |
| 381 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | RESTORATION OF AN ADEQUATE CONTENT OF ORGANIC MATTER IN SOILS, LIMITING THE USE OF INORGANIC FERTILIZERS, AND INCREASING THE USE OF ORGANIC FERTILIZERS AND COMPOST, OR THE USE OF RESIDUAL AND WASTE BIOMASS. ELIMINATION OR MARKED REDUCTION OF CHEMICAL FERTILIZERS TO BE REPLACED WITH COMPOST CERTIFIED AS ORGANIC WASTE AND MASSIVE USE OF COMPOST TO RESTORE THE CHEMICAL-PHYSICAL BALANCE OF THE SOIL (CONTRIBUTING TO THE CAPTURE OF CO2); | SOFT | Long term (Beyond 2020) | | | N | |
| 382 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEVELOPMENT AND DISSEMINATION OF NEW AND TRADITIONAL RAINWATER STORAGE SYSTEMS, PHYTODEPURATION OF WASTEWATER AND THEIR USE; | SOFT | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 383 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | INCENTIVE TO THE USE, WHERE POSSIBLE, OF NATURAL WATER RETENTION MEASURES (NWRMS) | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |

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| 384 | HYDROGEOLOGICAL INSTABILITY | HYDROMORPHOLOGICAL REDEVELOPMENT OF RIVER BEDS WITH RESTORATION, WHERE POSSIBLE, OF LATERAL CONNECTIVITY WITH CAREFUL DESIGN OF THE OUTFLOW CAPACITY; | SOFT | n.d. | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 385 | HYDROGEOLOGICAL INSTABILITY | RECOVERY OF PERIFLUVIAL AREAS AND IN PARTICULAR OF THEIR ECOLOGICAL FUNCTION; | SOFT | Long term (Beyond 2020) | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 386 | HYDROGEOLOGICAL INSTABILITY | MAINTENANCE OF RIVER BASINS WITH PARTICULAR REGARD TO SMALL BASINS; | SOFT | Long term (Beyond 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 387 | HYDROGEOLOGICAL INSTABILITY | FAVOR TARGETED PROJECTS FOR THE RENATURALIZATION OF RIVERS AND STREAMS | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | RLombardia NRRP – flood risk mitigation and prevention: 14. Re-naturalization of the right bank of the Lambro river upstream of the hydraulic power unit in via Monte Santo / E. Fermi in the municipality of Monza |
| 405 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | FUNCTIONAL RECOVERY OF THE SECONDARY HYDROGRAPHIC NETWORK | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | AdBPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches AdBPO - NRRP - Renaturation of the Po river - 2: Reactivation and reopening of abandoned oxbows and branches |
| 406 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | ON-SITE IMPROVEMENT OF WATER QUALITY, WITH THE ENHANCEMENT AND, IN CASE, CONSTRUCTION, OF NATURAL ECOSYSTEMS-FILTERS | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | River Basin Management plan (RBMP) | AdBPO | Y | |
| 408 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | FUNCTIONAL RECOVERY AND NATURAL AND ENVIRONMENTAL RESTORATION OF THE QUARRY AREAS CLOSE TO THE RIVER RELEVANT AREAS | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | AdBPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches AdBPO - NRRP - Renaturation of the Po river - 2: Reactivation and reopening of abandoned oxbows and branches Po river Sediment Management Plan |
| 409 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | CONSTRUCTION OF ECOLOGICAL NETWORKS THAT HAVE THE WATER COURSES AND / OR THE POSSIBLE STRENGTHENING OF THE EXISTING ECOLOGICAL AQUATIC NETWORKS AS THE SUPPORTING AXIS | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO AdBPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches AdBPO - NRRP - Renaturation of the Po river - 2: Reactivation and reopening of abandoned oxbows and branches RPiemonte – Regional Balance - Green Infrastructures for water bodies |
| 410 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REACTIVATION OF RELICT RIVERS AND LATERAL PROCESSES WITH THE RECOVERY OF MARGINAL AREAS AND THE RECONSTRUCTION OF WET MICROHABITATS AND VEGETATION BELTS | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | AdBPO – 1 National budget - Verification of stability and resistance of the Po river embankments AdBPO - NRRP - Renaturation of the Po river - 1: Restoration of oxbows and abandoned branches AdBPO - NRRP - Renaturation of the Po river - 2: Reactivation and reopening of abandoned oxbows and branches RPiemonte – Regional Balance - Green Infrastructures for water bodies AIPO - Natural-based solution to mitigate flood risk due to sand boils reactivations along the Po River |
| 411 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | ADJUSTMENT OF WATER LEVELS AND MANAGEMENT OF THE DEVELOPMENT OF VEGETABLE COASTAL ZONES IN NATURAL LAKES | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO |
| 413 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | MAINTENANCE AND RESTORATION INTERVENTIONS AIMED AT SLOWING DOWN THE COVERING OF WATER CAUSED BY ANTHROPIC ACTIVITIES, PREVENTING THEIR USE AS ABUSIVE LANDFILLS, REMOVING INVASIVE SPECIES | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | N | |

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| 414 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | RESTORATION AND REBUILDING OF MANY SITES IN ORDER TO RESTORE SYSTEMS WITH SIZE SUITABLE FOR THE CONSERVATION OF THREATENED AND / OR EXTINGUISHING SPECIES | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | N | |
| 416 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | CONSERVATION OF REGIONAL POOLS REPRESENTATIVE OF SOURCE HABITAT AND ESTAVELLE | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |
| 431 | AGRICULTURE AND FOOD PRODUCTION | PROGRESSIVELY REDUCED USE OF PLANT PROTECTION PRODUCTS AND FERTILISERS; | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 432 | AGRICULTURE AND FOOD PRODUCTION | INTEGRATION OF ACTIONS TO IMPROVE WATER AND SOIL MANAGEMENT WITH ACTIONS TO PRESERVE AND DEFEBD BIODIVERSITY AND LANDSCAPE FOR AN OVERALL INCREASE IN THE SUSTAINABILITY OF AGRICULTURAL PRODUCTION | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | 1) River Basin Management plan (RBMP) 2) Flood risk management plan (PGRA) | AdbPO | Y | WP3 – Technical and Methodological Approach – lead by CMCC Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAE |
| 433 | AGRICULTURE AND FOOD PRODUCTION | DIVERSIFICATION OF PRODUCTION ACTIVITIES THROUGH THE INTRODUCTION OF NEW CROPS AND / OR CULTURAL SYSTEMS THAT CONTRIBUTE TO STABILIZE COMPANY INCOME AND REDUCE THE DEMAND FOR WATER | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 434 | AGRICULTURE AND FOOD PRODUCTION | MAINTENANCE OF CULTURAL LANDSCAPES/AREAS AT BASIN OR DISTRICT SCALE | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 435 | AGRICULTURE AND FOOD PRODUCTION | CROP ROTATIONS (REDUCTION OF NITROGEN INPUTS, CONTROL OF NITRATE LEACHING, ETC.); | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 447 | COASTAL AREAS | RECOGNIZE THE ECONOMIC VALUE ASSOCIATED WITH THE ENVIRONMENTAL PROTECTION MEASURES | GREEN (ECOSYSTEM APPROACH) | Short and Long term (Beyond 2020) | River Basin Management plan (RBMP) | AdbPO | Y | |
| 451 | COASTAL AREAS | COASTAL AREA: CONSERVATION AND RECONSTRUCTION OF DUNES AND WET ZONES (PONDS, LAGOONS ETC), RIVER RENATURATION, CONSERVATION OF POSIDONIA OCEANICA, CORRECT PLANNING OF BEACH CLEANING | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | AdbPO – 1 National budget - Verification of stability and resistance of the Po river embankments AdbPO - NRRP - Renaturation of the Po river - 3: Conservation interventions on the river delta RLombardia NRRP – flood risk mitigation and prevention: 14. Re-naturalization of the right bank of the Lambro river upstream of the hydraulic power unit in via Monte Santo / E. Fermi in the municipality of Monza AIPO - CEF - WIN-IT: Works for implementing the Navigation in Northern Italy |
| 453 | AGRICULTURE AND FOOD PRODUCTION | RURAL AREA: IMPROVING THE EFFICIENCY IN THE USE OF WATER RESOURCES FOR AGRICULTURE AND PRESERVING LOCAL CROPS WHERE THE TOURIST ASPECT IS AN IMPORTANT COMPONENT OF AGRICULTURAL ACTIVITY | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 455 | URBAN SETTLEMENTS | ENCOURAGE AND INCENTIVIZE THE SPREADING OF GREEN ROOFS AND THE INCREASE OF PUBLIC AND PRIVATE GREEN ALSO FOR THE PURPOSE OF MODERATING THE EXTREME PHENOMENA OF SUMMER HEAT; | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |

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|-----|---------------------------|--|--------------------------------------|-----------------------------------|-----------------------------|-----------------------------|---|---|
| 456 | URBAN SETTLEMENTS | TO CARRY OUT, ALSO FOR DEMONSTRATION PURPOSES AND TO RAISE AWARENESS AMONG CITIZENS, EXPERIMENTAL INTERVENTIONS FOR THE CLIMATE ADAPTATION OF PUBLIC AREAS IN PARTICULARLY VULNERABLE NEIGHBOURHOODS, INCREASING THEIR GREEN ENDOWMENTS, SOIL PERMEABILITY, SOCIAL AREAS, HYDRAULIC PERFORMANCE; | SOFT | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 457 | URBAN SETTLEMENTS | INCREASE THE ENDOWMENT OF URBAN GREEN, ADOPTING THE LOGIC OF GREEN AND BLUE INFRASTRUCTURE, PREPARING MEASURES TO LIMIT CLIMATE IMPACTS ON EXISTING PUBLIC GREEN, SAFEGUARDING BIODIVERSITY IN THE URBAN ENVIRONMENT; | SOFT | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 458 | URBAN SETTLEMENTS | PROMOTE THE SPREADING OF URBAN VEGETABLE GARDENS, TO BE UNDERSTOOD FOR EDUCATIONAL PURPOSES BUT ALSO AS TARGETED FORMS OF REDEVELOPMENT OF UNDERUSED GREEN AREAS AND AS A CONTRIBUTION TO THE FOOD AUTONOMY OF URBAN SETTLEMENTS | SOFT | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 459 | URBAN SETTLEMENTS | MAINTENANCE OF NATURAL AREAS (AGRICULTURAL LANDS, WET AREAS, LAKES) WHERE TO ALLOW THE FLOODING OF RIVERS AND FLOODING DUE TO INTENSE RAIN | GREEN (ECOSYSTEM APPROACH) | Short and Long term (Beyond 2020) | | | Y | A dBPO – 1 National budget - Verification of stability and resistance of the Po river embankments RPiemonte – Rural development plan – Measures 4.4.1, 10.4.3, 10.7.3 - Forest and Herbaceous buffer strips RLombardia NRRP – flood risk mitigation and prevention: Measures 2 - 4 - 5 - 8 |
| 464 | ALPINE AREA AND APENNINES | ENHANCE CONSERVATION MEASURES AND RESTORING THE ECOLOGICAL INTEGRITY OF THE RIVER BANDS | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC A dBPO – 1 National budget - Verification of stability and resistance of the Po river embankments RPiemonte – Regional Balance - Green Infrastructures for water bodies RLombardia – Regional budget - flood risk mitigation and prevention |
| 468 | ALPINE AREA AND APENNINES | ANALYZE AND UPDATE THE EXISTING PROTECTION SYSTEMS, IF NECESSARY, CONSIDERING THE CHANGING SITUATION OF DANGERS, PRIVILEGING THE USE OF NATURAL PROTECTION SYSTEMS IN ADDITIONAL PROTECTION INTERVENTIONS WHEN NECESSARY | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | AIPO - Natural-based solution to mitigate flood risk due to sand boils reactivations along the Po River |
| 471 | WATER RESOURCES | WATER RECYCLING AND REUSE; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 472 | WATER RESOURCES | STRUCTURAL INTERVENTIONS FOR EFFICIENCY GAIN AND MODERNIZATION OF NETWORKS FOR THE REDUCTION OF LOSSES AND THE SIMULTANEOUS REDUCTION OF WITHDRAWALS FROM NATURAL WATER BODIES; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | n.d. | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |

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| 473 | WATER RESOURCES | MANAGEMENT AND USE OF RAIN RUNOFF IN URBAN AREAS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 474 | WATER RESOURCES | ADAPT THE MANAGEMENT OF WASTEWATER TREATMENT PLANTS AND RELATED SEDIMENTS FOR GREATER FREQUENCY OF EXTREME EVENTS (FLOODS, DROUGHTS, ETC.); | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 475 | WATER RESOURCES | TECHNOLOGICAL ADJUSTMENT AND IMPROVEMENT (INSTRUMENTS FOR MEASURING WITHDRAWALS, USES AND RESTRICTIONS, REMOTE CONTROL, SEPARATION OF BLACK AND GRAY WATER, ETC) | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI AdBPO – 1 National budget - Verification of stability and resistance of the Po river embankments AdBPO – 2 National budget - New DTM / orthophoto surveys and satellite interferometric data analysis AdBPO – 5 National budget - Measures to increase efficiency of water supply for irrigation, industry, energy and domestic use - Implementation and / or system enhancement of water accounting |
| 476 | WATER RESOURCES | DESALINATION THROUGH PHOTOVOLTAIC POWERED SYSTEMS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | N | |
| 477 | WATER RESOURCES | INCREASE IN THE CAPACITIES OF THE BASINS AND ARTIFICIAL TANKS THAT ALLOW TO PLAN THE MULTI-YEAR MANAGEMENT OF THE RESOURCE | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | Reservoirs and Water bodies Plan (Piano invasi) | AdBPO | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PolITO |
| 478 | WATER RESOURCES | INTRODUCTION OF MORE EFFICIENT INDUSTRIAL COOLING SYSTEMS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | N | |
| 479 | WATER RESOURCES | INCREASED CONNECTIVITY OF WATER INFRASTRUCTURE; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | 1) Drought management plan (PBI, Allegato 3 - Direttiva Magre) | AdBPO | Y | |
| 480 | WATER RESOURCES | NETWORK CONVERSION ONLY FOR IRRIGATION USE; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | 1) Drought management plan (PBI, Allegato 3 - Direttiva Magre) | AdBPO | Y | |
| 481 | WATER RESOURCES | MAINTENANCE OF THE MULTI-FUNCTION WATER NETWORK; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | 1) Drought management plan (PBI, Allegato 3 - Direttiva Magre) | AdBPO | Y | |
| 482 | WATER RESOURCES | INCREASE OF STORAGE POTENTIALS IN RURAL AREAS PRIVILEGING DIFFUSED, LOW ENVIRONMENTAL IMPACT AND MULTIPLE USE INTERVENTIONS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | N | |

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| 483 | WATER RESOURCES | INTERVENTIONS FOR THE IRRIGATION REUSE OF WASTEWATER; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 484 | WATER RESOURCES | CONVERSION, WHERE PERMITTED BY CROPS TYPES, OF HIGH-CONSUMPTION IRRIGATION SYSTEMS TO IMPROVE WATERING EFFICIENCY AND CONTEXTUALLY REDUCE WITHDRAWAL FROM NATURAL WATER SOURCES | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 485 | WATER RESOURCES | SUPPORT FOR THE CONSTRUCTION OF INDUSTRIAL AREA WATER INFRASTRUCTURES AND DUAL NETWORKS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | N | |
| 486 | WATER RESOURCES | ACTIONS IN OTHER SECTORS THAT ALLOW TO OPTIMIZE / DECREASE THE USE OF THE RESOURCE (EG IN AGRICULTURE: USE OF NEW AND LESS WATER-DEMANDING CULTURES; TOURISM: ESTABLISH RULES FOR A MORE CONSCIOUS USE OF WATER, PURSUING THE OBJECTIVES OF THE WATER FRAMEWORK DIRECTIVE AND THOSE CONNECTED TO IT | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | n.d. | | | Y | WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 487 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEVELOPMENT OF THE AVAILABILITY OF GOOD QUALITY WATER RESOURCES, THROUGH ADEQUATE STORAGE, TRANSFER AND DISTRIBUTION INFRASTRUCTURES, IN FULL COHERENCE WITH THE OBJECTIVES OF THE RIVER BASIN DISTRICT MANAGEMENT PLANS, ALLOWING QUALITY CROPS TO BE PLANTED WITHIN EXTENSIVE DEVELOPMENT PROGRAMS; | GREEN (ECOSYSTEM APPROACH) | n.d. | 1) Po river Water balance plan (PBI) 2) Water use and protection Plan (PTUA) 3) River Basin Management plan (RBMP) | 1) AdbPO 2) Regions | Y | ADBPO - National Cohesion and Development Fund (FSC 2021-2025) |
| 488 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | DEVELOPMENT AND DISSEMINATION OF RAINWATER COLLECTION AND USE SYSTEMS; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 489 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | FURTHER DISSEMINATION OF DRIP IRRIGATION METHODS OR WATER-SAVING IRRIGATION; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 490 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | IMPROVEMENT OF THE WATER DISTRIBUTION NETWORK (MAINTENANCE WORKS, MODERNIZATION) AND MANAGEMENT IN AREAS AFFECTED BY INSUFFICIENT OR SCARCE AVAILABILITY; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | NRRP - Reduction of losses in water distribution networks, including digitization and monitoring of networks |
| 491 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | USE, ESPECIALLY IN AREAS AT RISK OF DESERTIFICATION, OF NON-WATER-DEMANDING CROPS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 492 | DESERTIFICATION, DEGRADATION OF THE TERRITORY AND DROUGHT | PROMOTION OF THE USE OF ORGANIC FERTILIZERS AND CONSERVATIVE METHODS OF CULTIVATION; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF Task 8.3 - Land Degradation Neutrality (LDN) methodology for basin district territorial planning – lead by ERSAF |

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| 494 | HYDROGEOLOGICAL INSTABILITY | ELIMINATION OF THE CRITICAL SITUATIONS OF THE NETWORK (RESTRICTIONS, DRAINS) | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | Flood risk management plan (PGRA) | AdBPO | Y | Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO |
| 495 | HYDROGEOLOGICAL INSTABILITY | RELOCATION OF RISK AREAS; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | WP2 – Multilevel Governance and Coordination of Funding – lead by AdBPO WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF |
| 496 | HYDROGEOLOGICAL INSTABILITY | CONTROL AND ADPTATION AND UPGRADE OF ARTIFICIAL BASINS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | Task 5.1 - Integrated management of the great lakes (Maggiore, Como, Iseo, Idro and Garda) – lead by AdBPO Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO |
| 505 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | REMOVAL OF DEFENSE WORKS AND NON-STRATEGIC INFRASTRUCTURES AND MORE CAREFUL EVALUATION OF THE DESIGN OF NEW INFRASTRUCTURES (EG RIVER BASINS) | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 6.3 Limiting hydraulic risk and strengthening the ecosystem functionality of the Lambro river basin in the Milan metropolitan area - lead by ERSAF / AIPO AdBPO - NRRP - Renaturation of the Po river: Measures 1 - 2 - 3 RPiemonte – Regional Balance - Green Infrastructures for water bodies RLombardia NRRP – flood risk mitigation and prevention: 14. Re-naturalization of the right bank of the Lambro river upstream of the hydraulic power unit in via Monte Santo / E. Fermi in the municipality of Monza |
| 506 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | INCREASE OF THE AREAS TO BE DESTINED TO THE EXPANSION OF FLOODS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO AdBPO – 1 National budget - Verification of stability and resistance of the Po river embankments RLombardia NRRP – flood risk mitigation and prevention: Measures 2 - 4 - 5 - 8 |
| 507 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | WITHDRAWAL AND USE OF WATER BASED ON SUSTAINABLE AND ADAPTIVE MANAGEMENT OF WATER USE WITH DISTINCT ACTIONS FOR DIFFERENT TYPES OF LAKES | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI |
| 508 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | CONTROL AND POSSIBLE LIMITATIONS TO THE EXPLOITATION OF WATER (OF ALLUVIONAL ORIGIN, KARTS PLATEAU) IN ORDER TO PRESERVE THE INTEGRITY AND FUNCTIONALITY OF THE CONNECTED TERRESTRIAL ECOSYSTEMS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 5.2 - Floating of the artificial underground reservoirs in ways that respect the valley river environment – lead by PoliTO Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |
| 509 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | CONTROL OF POLLUTANTS THAT REACH THE AQUIFERS WITH REFERENCE TO TOXIC SUBSTANCES IN ORDER TO PRESERVE THE INTEGRITY AND FUNCTIONALITY OF THE TERRESTRIAL ECOSYSTEMS CONNECTED TO THEM | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 6.1 - Nature-based solutions for riparian area management – lead by PoliTO Task 6.2 - Priority ecosystem services and green infrastructure network in the Po Basin – lead by CMCC |
| 510 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | MONITORING OF KARST AND ALLUVIAL COASTAL AQUIFERS IN AREAS SUBJECT TO INTENSIVE AGRICULTURE WHERE THERE IS THE ASCENT OF THE SALT WEDGE. | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | | | N | |

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| 511 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | EVALUATION OF THE IMPACT OF HYDRAULIC ENGINEERING WORKS AND ADOPTION OF COMPLEMENTARY WORKS OF ADAPTIVE AND FLEXIBLE NATURALISTIC ENGINEERING, BOTH AT SEA AND ALONG THE AFFERENT WATERWAYS. | GREEN (ECOSYSTEM APPROACH) | n.d. | | | Y | WP3 – Technical and Methodological Approach – lead by CMCC WP4 – Stakeholders Engagement and Capacity Building – lead by AdBPO and ERSAF WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO WP10 – Dissemination, Communication and Networking – lead by LEGAMBIENTE and CMBO |
| 515 | AGRICULTURE AND FOOD PRODUCTION | FORMULATE INDICATORS (IN LINE AND IN SYNERGY WITH EXISTING ONES OR IDENTIFIED BY THE CURRENT 2014-2020 PROGRAMMING) TO MONITOR THE IMPACT OF CLIMATE CHANGE, INCLUDING THE IMPACT IN TERMS OF VULNERABILITY AND PROGRESS MADE ON ADAPTATION; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | n.d. | | | Y | WP9 - Monitoring and Evaluation of Project Impacts and Complementary Actions – lead by UNIBO Task 7.1 - Risk planning and real-time management of critical events generated by storms - lead by ARPAAE |
| 516 | AGRICULTURE AND FOOD PRODUCTION | INNOVATION WITH INFRASTRUCTURAL INVESTMENTS AT COMPANY LEVEL (E.G. FROST AND HAIL PROTECTION STRUCTURES AND SYSTEMS, HIGH-EFFICIENCY IRRIGATION SYSTEMS); | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 517 | AGRICULTURE AND FOOD PRODUCTION | CHOICE OF IRRIGATION SYSTEMS THAT MAXIMIZE THE EFFICIENCY OF WATER USE AND ALLOW A SIMULTANEOUS REDUCTION OF THE WITHDRAWAL FROM NATURAL WATER BODIES, WHILE ENSURING THE PREVENTION OF RISKS OF SALINIZATION OF SOILS IN ARID AREAS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | n.d. | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 518 | AGRICULTURE AND FOOD PRODUCTION | RECOVERY, RENOVATION AND MAINTENANCE OF HYDRAULIC-AGRICULTURAL AREAS, PARTICULARLY IN HILLY ENVIRONMENTS, THROUGH PARTICIPATORY DESIGN AT MICRO BASIN SCALE (TERRACES, EMBANKMENTS, ROWS IN TURN SYSTEMS, ETC.). | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 519 | AGRICULTURE AND FOOD PRODUCTION | MORE RESPONSIBLE CHOICE OF SOIL PROCESSING TECHNIQUES AND THE USE OF ALTERNATIVE CULTURAL TECHNIQUES ACCORDING TO THE SPECIFIC ENVIRONMENTAL CONDITIONS AND NEW AVAILABLE TECHNOLOGIES | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | Task 8.1 - Sustainable and adaptive irrigation agriculture – lead by ANBI Task 8.2 - Conservation techniques for agricultural soils – lead by ERSAF |
| 521 | AGRICULTURE AND FOOD PRODUCTION | INNOVATION IN THE FIELD OF MECHANIZATION, ALSO THROUGH THE INTRODUCING OF SHARING. | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | | | Y | NRRP - Integration of complementary funds through the NRRP instrument |
| 527 | COASTAL AREAS | IMPLEMENTATION OR DEVELOPMENT OF EFFICIENT AND SUSTAINABLE MONITORING ACTIVITIES FOR THE EVALUATION OF THE ECOSYSTEM SUPPORT SERVICES OF THE COASTAL AREA AND THEIR SPATIAL AND TEMPORARY VARIATIONS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short term (before 2020) | | | Y | Task 7.2 - Coastal alert system for extreme water events to adapt to climate change – lead by CMCC RER – Rural Development Plan |
| 539 | INLAND AND TRANSITIONS WATER ECOSYSTEMS | IMPLEMENTATION OF ENVIRONMENTAL CONTROLS AND SURVEILLANCE SYSTEMS FOR WATERBORNE DISEASES; | GREEN (ECOSYSTEM APPROACH) | Short term (before 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 542 | URBAN SETTLEMENTS | INCREASE THE RESILIENCE OF INTEGRATED WATER SERVICES TO EXTREME WEATHER EVENTS | GREEN (ECOSYSTEM APPROACH) | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |


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| 544 | URBAN SETTLEMENTS | PREVENT THE INCREASE OF HYDRAULIC AND GEOMORPHOLOGICAL RISKS, COMPLETING THE LEGISLATIVE PROCESS INITIATED BY DLGS 49/2010 FOR THE IMPLEMENTATION OF THE DIRECTIVE ON THE ASSESSMENT AND MANAGEMENT OF FLOOD RISKS AND CAREFULLY SELECTING THE INFRASTRUCTURAL DEFENSE WORKS | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short and Long term (Beyond 2020) | Flood risk management plan (PGRA) | AdBPO | Y | |
| 545 | URBAN SETTLEMENTS | INTERVENE IN THE SETTLEMENTS HYDRAULICALLY-CRITICAL AREAS THROUGH THE MAINTENANCE AND STRENGTHENING OF DRAINAGE NETWORKS AND RELATED SYSTEMS, THROUGH THE REPLACEMENT OF PAVED AREAS WITH PERMEABLE MATERIALS AND THE CONSTRUCTION OF MULTIFUNCTIONAL STORAGE TANKS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 546 | URBAN SETTLEMENTS | SELECT AND PLAN SPENDING ON PUBLIC WORKS, ESPECIALLY INFRASTRUCTURE, FAVOURING THE SECURING OF THE EXISTING STRATEGIC IMPORTANCE ONES AND THEIR FUNCTIONALITY DURING EXTREME EVENTS; | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Short and Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |
| 548 | URBAN SETTLEMENTS | ENCOURAGE THE EXPERIMENTATION OF NEW SETTLEMENT MODELS CAPABLE OF COPING WITH CLIMATE CHANGE (EG: ECO-NEIGHBORHOODS, CLIMATE-HOUSES, CLIMATE REQUALIFICATION) | GRAY (INFRASTRUCTURE AND TECHNOLOGY) | Long term (Beyond 2020) | SECAPs (Covenant of Mayors) | Local governments e Regions | Y | |

ANNEXES

COMPLEMENTARY FUNDING DECLARATION

COFINANCING DECLARATION

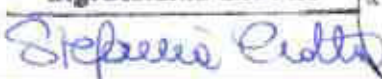

(To be filled in and signed by the cofinancers and uploaded as part of the application (or at the latest during grant agreement preparation). To insert additional cofinancing declarations, copy the table as many times as necessary)

| COFINANCER | |
|--|---|
| Legal name: | REGIONE PIEMONTE - Direzione AGRICOLTURA E CIBO |
| Legal address: | Corso Regina, 174 10100 Torino ITALY agricoltura@regione.piemonte.it |
| FINANCIAL COMMITMENT | |
| Name of the project to which we contribute: | Climate Adaptation for the Po River basin district — CLIMAX PO |
| Amount to be contributed: | 1.190.000 EUR |
| Status of the financial commitment: | confirmed |
| Comments: | EAFRD - PSR 2014-2020 (2022) Measures 4.4.1 - Elementi naturaliformi dell'agroecosistema |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | Paolo BALOCCO, Director |
| Date of signature: | 18 marzo 2022 |
| Signature and stamp: |  |

IL DIRETTORE REGIONALE
Dr. Paolo BALOCCO



COFINANCING DECLARATION

(To be filled in and signed by the cofinancers and uploaded as part of the application (or at the latest during grant agreement preparation). To insert additional cofinancing declarations, copy the table as many times as necessary)

| COFINANCER | |
|---|--|
| Legal name: | REGIONE PIEMONTE - Direzione AMBIENTE ENERGIA E TERRITORIO |
| Legal address: | Via Principe Amedeo, 17 10123 Torino ITALY territorio-ambiente@regione.piemonte.it |
| FINANCIAL COMMITMENT | |
| Name of the project to which we contribute: | Climate Adaptation for the Po River basin district — CLIMAX PO |
| Amount to be contributed: | 5.800.000 EUR |
| Status of the financial commitment: | confirmed |
| Comments: | Regional Funds that derive from the proceeds of the fees for public water use to implement the WBMP measures Green infrastructures for water bodies 2.800.00 € (2021-2022) - 3.000.000 € (2022-2023) |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | Stefania CROTTA, Director |
| Date of signature: | 28/03/2022 |
| Signature and stamp: |   |

COFINANCING DECLARATION

(To be filled in and signed by the cofinancers and uploaded as part of the application (or at the latest during grant agreement preparation). To insert additional cofinancing declarations, copy the table as many times as necessary)

| COFINANCER | |
|---|---|
| Legal name: | REGIONE PIEMONTE - Direzione AMBIENTE ENERGIA E TERRITORIO |
| Legal address: | Via Principe Amedeo, 17 10123 Torino ITALY territorio-ambiente@regione.piemonte.it |
| FINANCIAL COMMITMENT | |
| Name of the project to which we contribute: | Climate Adaptation for the Po River basin districtect -- CLIMAX PO |
| Amount to be contributed: | 25.763.000 EUR |
| Status of the financial commitment: | not confirmed |
| Comments: | ERDF 2021-2027 Policy Objective 2 Action II.2iv.5 - Interventions to increase the resilience of river territories to climate change |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | Stefania CROTTA, Director |
| Date of signature: | 18/03/2022 |
| Signature and stamp: | <p>IL DIRETTORE REGIONALE ing. Stefania CROTTA</p>   |

COMPLEMENTARY FUNDING DECLARATION

(To be filled in and signed by the managing/competent authority which would provide funding to complement the LIFE SNAP / SIP proposal and uploaded as part of the application. To insert additional declarations, copy the table as many times as necessary.)

| SUPPORTING AUTHORITY | |
|---|--|
| Authority: | [Autorità di Bacino Distrettuale del Fiume Po – AdBPo] |
| Department: | [Water resources management service] |
| Contact person: | [Andrea Colombo], [Dirigente] |
| Legal address: | [Strada Garibaldi], [75] [43121] [Parma] [Italia] |
| CONFIRMATION OF SUPPORT FOR COMPLEMENTARY FUNDING | |
| Name of the project we support: | [CLIMate Adaptation for the Po river basin district] — [CLIMAX PO] |
| We hereby confirm that: | |
| 1) the complementary actions identified in this proposal are in principle eligible for our financing | Yes |
| 2) the amount available for potential financial support would be: | [206.653.679,00] EUR |
| 3) the financial support would be available as from: | [2022] |
| 4) we support the application and will take into account the link to the LIFE SIP/SNAP project when assessing the request for funding | Yes |
| Additional comments (optional) | |
| Insert text | |
| STATUS OF THE FINANCIAL COMMITMENT | |
| Status: | [committed / confirmed] [to be committed / confirmed] |
| Comments: | [insert comments] |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | [Meuccio Berselli], [AdBPo Secretary-General and LEAR] |
| Date of signature: | [06-04-2022] |

| | |
|----------------------|---|
| Signature and stamp: | [Meuccio Berselli]   |
|----------------------|---|

| HISTORY OF CHANGES | | |
|--------------------|------------------|----------------------------|
| VERSION | PUBLICATION DATE | CHANGE |
| 1.0 | 15.04.2021 | Initial version (new MFF). |
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COMPLEMENTARY FUNDING DECLARATION

(To be filled in and signed by the managing/competent authority which would provide funding to complement the LIFE SNAP / SIP proposal and uploaded as part of the application. To insert additional declarations, copy the table as many times as necessary.)

| SUPPORTING AUTHORITY | |
|---|--|
| Authority: | [Agenzia Interregionale per il fiume Po] |
| Department: | [Direzione Territoriale Idrografica Lombardia Occidentale] |
| Contact person: | [Marco La Veglia], [Dirigente] |
| Legal address: | [strada Garibaldi], [75] [43121 [Parma [Italia] [marco.laveglia@agenziapo.it] |
| CONFIRMATION OF SUPPORT FOR COMPLEMENTARY FUNDING | |
| Name of the project we support: | [CLIMate Adaptation for the PO river basin district] — [CLIMAX PO] |
| We hereby confirm that: | |
| 1) the complementary actions identified in this proposal are in principle eligible for our financing | Yes |
| 2) the amount available for potential financial support would be: | [5.561.933] EUR |
| 3) the financial support would be available as from: | [2022] |
| 4) we support the application and will take into account the link to the LIFE SIP/SNAP project when assessing the request for funding | YES |
| Additional comments (optional) | |
| The actions inserted cannot be changed but their objectives are coherent and synergic with CLIMAX objectives | |
| STATUS OF THE FINANCIAL COMMITMENT | |
| Status: | [committed / confirmed] |
| Comments: | [SandBoil committed] [WIN-IT confirmed] |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | [Luigi Mille], [AIPO Director and LEAR] |
| Date of signature: | [06-04-2022] |
| Signature and stamp: | [LUIGI MILLE]  IL DIRETTORE Dott. Ing. Luigi Mille  |

| HISTORY OF CHANGES | | |
|--------------------|------------------|----------------------------|
| VERSION | PUBLICATION DATE | CHANGE |
| 1.0 | 15.04.2021 | Initial version (new MFF). |
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COMPLEMENTARY FUNDING DECLARATION

(To be filled in and signed by the managing/competent authority which would provide funding to complement the LIFE SNAP / SIP proposal and uploaded as part of the application. To insert additional declarations, copy the table as many times as necessary.)

| SUPPORTING AUTHORITY | |
|---|--|
| Authority: | REGIONE LOMBARDIA |
| Department: | [DIREZIONE GENERALE TERRITORIO E PROTEZIONE CIVILE] |
| Contact person: | [IMMACOLATA TOLONE], [MANAGER] [MARINA CREDALI], [OFFICER] |
| Legal address: | [PIAZZA CITTA' DI LOMBARDIA], [1] [20124] [MILANO] [ITALIA] [Immacolata_tolone@regione.lombardia.it] [Marina_Credali@regione.lombardia.it] |
| CONFIRMATION OF SUPPORT FOR COMPLEMENTARY FUNDING | |
| Name of the project we support: | [CLIMAX PO] |
| We hereby confirm that: | |
| 1) the complementary actions identified in this proposal are in principle eligible for our financing | Yes |
| 2) the amount available for potential financial support would be: | 153.571.161,1 |
| 3) the financial support would be available as from: | 1.680.000,00 from 05/2022 124.207.143,50 from 05/2022 21.634.017,60 from 12/2022 6.050.000,00 not yet granted |
| 4) we support the application and will take into account the link to the LIFE SIP/SNAP project when assessing the request for funding | Yes |
| Additional comments (optional) | |
| Insert text | |
| STATUS OF THE FINANCIAL COMMITMENT | |
| Status: | Partially confirmed |
| Comments: | |
| SIGNATURE OF THE AUTHORISED PERSON | |


| | |
|-----------------------------|------------------|
| Name and function: | ROBERTO CERRETTI |
| Date of signature: | 06/04/2022 |
| Signature and stamp: | |

| HISTORY OF CHANGES | | |
|---------------------------|-------------------------|----------------------------|
| VERSION | PUBLICATION DATE | CHANGE |
| 1.0 | 15.04.2021 | Initial version (new MFF). |
| 2.0 | 06.04.2022 | Revision |
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COMPLEMENTARY FUNDING DECLARATION

(To be filled in and signed by the managing/competent authority which would provide funding to complement the LIFE SNAP / SIP proposal and uploaded as part of the application. To insert additional declarations, copy the table as many times as necessary.)

| SUPPORTING AUTHORITY | |
|---|--|
| Authority: | EMILIA-ROMAGNA REGION |
| Department: | GENERAL DIRECTORATE RESOURCES, EUROPE, INNOVATION AND INSTITUTIONS |
| Contact person: | FRANCESCO RAPHAEL FRIERI, GENERAL MANAGER |
| Legal address: | VIALE ALDO MORO, 18 40127 BOLOGNA ITALY Francesco.Frieri@regione.emilia-romagna.it ProgrammiArea@regione.emilia-romagna.it |
| CONFIRMATION OF SUPPORT FOR COMPLEMENTARY FUNDING | |
| Name of the project we support: | CLIMAX PO |
| We hereby confirm that: | |
| 1) the complementary actions identified in this proposal are in principle eligible for our financing | Yes |
| 2) the amount available for potential financial support would be: | 49.138.673 EUR |
| 3) the financial support would be available as from: | 01/2023 |
| 4) we support the application and will take into account the link to the LIFE SIP/SNAP project when assessing the request for funding | Yes |
| Additional comments (optional) | |
| The amount available is composed above all by EAFRD/ Rural Development Plan 2021-2022 and ERDF/ Regional Operational | |
| STATUS OF THE FINANCIAL COMMITMENT | |
| Status: | TO BE COMMITTED |
| Comments: | The above programs will be approved shortly in all regions of Italy |
| SIGNATURE OF THE AUTHORISED PERSON | |
| Name and function: | FRANCESCO RAPHAEL FRIERI, GENERAL MANAGER |

| | |
|----------------------|--|
| Date of signature: | APRIL 6 th , 2022 |
| Signature and stamp: |  IL DIRETTORE GENERALE RISORSE, EUROPA, INNOVAZIONE E ISTITUZIONI Francesco Rachael Dir. |

| HISTORY OF CHANGES | | |
|--------------------|------------------|----------------------------|
| VERSION | PUBLICATION DATE | CHANGE |
| 1.0 | 15.04.2021 | Initial version (new MFF). |
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ANNEXES

LETTER OF SUPPORT



**UNIVERSITÀ
DI PARMA**

**DIPARTIMENTO DI INGEGNERIA
E ARCHITETTURA**

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma – Italy

Parma, march 31st 2022

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the Università degli Studi di Parma (UNIPR) confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

UNIPR supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, UNIPR does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Prof. Antonio Montepara

Head of Department of Civil Engineering and Architecture

Firmato digitalmente ai sensi del D.Lgs. n. 82/2005



Prot. n. 495 del 05/04/2022

Mantova, 05/04/2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, with this letter the **Azienda Speciale Ufficio di Ambito della Provincia di Mantova** (ATO Mantova) intend to provide our support to the consortium of the CLIMAX PO – “CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

ATO Mantova deals with the regulation and control of the integrated water service in the Optimal Territorial area of the Province of Mantova

For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;
- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

By signing this letter of support, ATO Mantova does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

The Director
Ing. Francesco Peri



Milano, 31 marzo 2022

Prot. N. 778/2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, Associazione Nazionale Comuni d'Italia - Lombardia (ANCI Lombardia) confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

ANCI Lombardia supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, **ANCI Lombardia** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Rinaldo Mario Redaelli
Segretario Generale di ANCI Lombardia

LA CASA DEI COMUNI



Lisboa, 30/03/2022

Autorità di Bacino Distrettuale del Fiume Po
 Strada Giuseppe Garibaldi 75
 43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, Tagus and West River Basin District Administration from the Portuguese Environment Agency (APA/ARHTO), intend to provide our support to the consortium of the CLIMAX PO – “CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

Tagus and West River Basin District Administration (ARHTO) is a regional department of the Portuguese Environment Agency (APA), a public entity that acts as the National Water Authority, namely proposing, developing and monitoring the implementation of water resources policy, with a view to its protection and valorisation, through the planning and organisation of water resources and water uses, the management of hydrographic regions, the issuing of titles for the use of non-marine water resources and the monitoring of compliance with their application, the analysis of the incidences of human activities on the state of the waters, the management of monitoring networks, as well as ensuring the achievement of the objectives of the Water Law and promoting the efficient use of water.

For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;
- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

1/2



By signing this letter of support, Tagus and West River Basin District Administration from the Portuguese Environment Agency (APA/ARHTO) does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Pimenta Machado
Assinado de
forma digital por
Pimenta Machado
Dados: 2022.03.31
14:24:59 +01'00'

Pimenta Machado

O Vice-Presidente do Concelho Diretivo da APA, IP

Imp_059_11_Papel_Timbrado_APAIP



Portuguese Environment Agency

Évora, 29/3/2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, Alentejo River Basin District Administration (**APA/ARH Alentejo**) intend to provide our support to the consortium of the CLIMAX PO – “CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

Alentejo River Basin District Administration is a regional department of the Portuguese Environment Agency (APA), a public entity that acts as the National Water Authority, namely proposing, developing and monitoring the implementation of water resources policy, with a view to its protection and valorisation, through the planning and organisation of water resources and water uses, the management of hydrographic regions, the issuing of titles for the use of non-marine water resources and the monitoring of compliance with their application, the analysis of the incidences of human activities on the state of the waters, the management of monitoring networks, as well as ensuring the achievement of the objectives of the Water Law and promoting the efficient use of water.

For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;



Portuguese Environment Agency

- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

By signing this letter of support, **APA/ARH Alentejo** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

António André Pinto Matoso Pereira
Head of Department (Alentejo River Basin District Administration)

SEDE LEGALE

Via della Navicella, 2-4

00184 Roma (Italy)

T +39 06 47836.1

C.F. 97231970589 J P.I. 08183101008

Roma, 05/04/2022

All' Autorità di Bacino Distrettuale del Fiume Po

Strada Giuseppe Garibaldi 75

43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, with this letter the Council for Research in Agriculture and the analysis of the agricultural economy - Research Centre for Agricultural Policies and Bioeconomy (CREA-PB) intend to provide our support to the consortium of the CLIMAX PO – “CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

CREA is an Italian public research and experimentation institution monitored by the Italian Ministry of Agricultural, Food and Forestry Policies (MiPAAF). It has scientific competence in the agricultural, agri-food, agro-industrial, fish, forest, human nutrition and food sectors, in rural development and agricultural economics. The principal strategic objectives of the institution are to promote the sustainable and efficient use of natural resources, in particular water and soil, and to promote climate change adaptation and mitigation, to make agricultural and forestry systems more resilient. Among the 12 Research Centers located in 19 Regions, the Research Center for Agricultural Policies and Bioeconomy (CREA-PB), develops analysis and provides support in processing of sector policies, monitoring their evolution and assessing their effects on the systems and, in this specific

CREA - Centro di ricerca Politiche e Bio-economia
CREA - Research Centre for Agricultural Policies and Bioeconomy

@ pb@crea.gov.it f pb@pec.crea.gov.it

W www.crea.gov.it

Sede Amministrativa - Via Barberini, 36 - 00187 Roma

Sede di Roma - Via Ardeatina, 546 - 00178 Roma

Sede di Roma - Via C.G. Bertero, 22 - 00156 Roma

T +39 06 47856.1

SEDE LEGALE

Via della Navicella, 2-4

00184 Roma (Italy)

T +39 06 47836.1**C.F.** 97231970589 **P.I.** 08183101008

case, analyzing the relationship between water and water resources policies, also in relation to the issue of sustainability and innovation in the use of irrigation resources. It carries out technical assistance to MiPAAF in funding sustainable irrigation investment as adaptation measure to climate change.

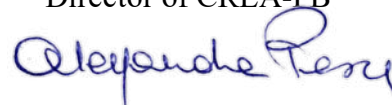
For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;
- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

By signing this letter of support, **CREA** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Alessandra Pesce
Director of CREA-PB





Milan, April 5th, 2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, with this letter the Municipality of Milan (CdM) intend to provide our support to the consortium of the CLIMAX PO – “CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

The Municipality of Milano is a public body, a municipality in charge of urban and sustainable policies within the communal area. As such, it doesn't perform any economic activities.

For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;
- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

By signing this letter of support, Cdm does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Dott. Angelo Pascale
Direttore Verde e Ambiente
Comune di Milano



Consorzio dell'Adda

20121 MILANO – CORSO GARIBALDI, 70
TEL. 02 – 6572776 – segreteria@addaconsorzio.it
COD. FISC.: 80060130152

Milano, 30 Marzo 2022

N. 22-150

Riferimento: Autorità di Bacino (12CBIS)

Spett.

Autorità di Bacino Distrettuale del Fiume Po
climaxpo@adbpo.it

e, p.c. **Prof. Pierluigi Claps**
Politecnico di Torino
pierluigi.claps@polito.it

Oggetto: candidatura progetto LIFE ClimaxPO

In riferimento alla candidatura della nuova versione del progetto Life in oggetto, questo Consorzio ribadisce il proprio interesse alla tematica e la propria disponibilità alla collaborazione ma comunica la propria indisponibilità al ruolo di partner.

A tale sofferta decisione si è giunti in relazione a diverse motivazioni di seguito brevemente riepilogate e sopraggiunte rispetto alla prima versione di oltre 2 anni fa.

La sempre maggiore complessità della documentazione amministrativa-rendicontativa, da presentare non solo in fase di candidatura ma anche e soprattutto di partecipazione, nel caso di esito favorevole della candidatura stessa, comporta un onere significativo per strutture tecnico-amministrative molto limitate come quelle dei Consorzi di regolazione dei laghi.

Gli impegni straordinari assunti dai consorzi (importanti attività manutentive sulla diga) proprio in questi anni determinano notevole appesantimento e responsabilità aggiuntive rispetto all'attività ordinaria, sovraccaricando il personale disponibile che è da sempre limitato.

Il fatto di non poter, di fatto, attivare collaborazioni esterne significative a cui assegnare lo svolgimento delle attività per la limitatezza dei budget disponibili, considerata anche la notevole durata prevista del progetto.

La volontà di non rallentare e/o ostacolare le attività del gruppo di lavoro con ritardi o mancanze in cui temiamo di incorrere (basta un'assenza imprevista e non c'è nessuno che possa intervenire).

Altro progetto simile in valutazione a cui precedentemente si è data manifestazione di interesse.

La possibilità di fornire un contributo, sia in termini di confronto tecnico che di fornitura di dati, senza necessariamente assumere il ruolo di partner che comporta le sopra citate criticità.

Per quanto sopra evidenziato vi confermiamo l'interesse nei contenuti e nei risultati attesi e la piena disponibilità a collaborare alla migliore riuscita dell'iniziativa stessa senza però il coinvolgimento diretto con ruolo di partner di progetto.

A disposizione per chiarimenti, si porgono distinti saluti.

Consorzio dell'Adda
Il Direttore
Ing. Luigi Bertoli



Brescia, 28/3/22

Spett. Autorità di Bacino Distrettuale del Fiume Po
Via Garibaldi 75
43121 Parma
climaxpo@adbpo.it

e, p.c. Prof. Pierluigi Claps
Politecnico di Torino
C.so Duca degli Abruzzi 24,
10129 TORINO
pierluigi.claps@polito.it

Oggetto: candidatura progetto LIFE ClimaxPO

In riferimento alla candidatura del progetto Life in oggetto questo Consorzio ribadisce il proprio interesse alla tematica e la propria disponibilità alla collaborazione ma comunica la propria indisponibilità al ruolo di partner.

A tale sofferta decisione si è giunti in relazione a diverse motivazioni di seguito brevemente riepilogate.

La sempre maggiore complessità della documentazione amministrativa-rendicontativa, da presentare non solo in fase di candidatura ma anche e soprattutto di partecipazione, nel caso di esito favorevole della candidatura stessa, che comportano un onere significativo per strutture tecnico-amministrative molto limitate come quelle dei Consorzi di regolazione dei laghi.

Gli impegni straordinari assunti dai consorzi (importanti attività manutentive) proprio in questi anni che determinano notevole appesantimento e responsabilità aggiuntive rispetto all'attività ordinaria, sovraccaricando il limitato personale disponibile

Il fatto di non poter, di fatto, attivare collaborazioni esterne significative a cui assegnare lo svolgimento delle attività per la limitatezza dei budget disponibili, considerata anche la notevole durata prevista.

La volontà di non rallentare e/o ostacolare le attività del gruppo di lavoro con ritardi o mancanze in cui temiamo di incorrere.

La possibilità di fornire un contributo, sia in termini di confronto tecnico che di fornitura di dati, senza necessariamente assumere il ruolo di partner che comporta le sopra citate criticità.

Per quanto sopra evidenziato vi confermiamo l'interesse nei contenuti e nei risultati attesi e la piena disponibilità a collaborare alla migliore riuscita dell'iniziativa stessa senza però il coinvolgimento diretto con ruolo di partner di progetto.

Direttore Doriana Bellani

Milano 28 marzo 2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the Consulta Regionale degli Ordini Ingegneri della Lombardia (CROIL) confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

CROIL supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, CROIL does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Augusto Allegrini





NORTH-TRANS-DANUBIAN
WATER DIRECTORATE
GYŐR

Date:
01.04.2022.

**Subject: Letter of support to the LIFE CLIMAX PO "CLIMate
Adaptation for the PO river basin district"**

Ref.number of
addressee:

Appendix: -

Administrator of
addressee:

Autorità di Bacino Distrettuale del Fiume Po

Parma
Strada Giuseppe Garibaldi 75
IT-43121

File number:
30983-0002/2022

Administrator:
Máté Arnóczki

To whom it may concern,

By means of this letter, with this letter the **North-Transdanubian Water Directorate (ÉDUVIZIG)** intend to provide our support to the consortium of the CLIMAX PO – "CLIMate Adaptation for the PO river basin district" project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

The North-Transdanubian Water Directorate is a state budget organization. In its operational area it is the major actor in the implementation and execution of the integrated water management tasks and gives assistance to partner associations to complete their part of the process. The institute deals with horizontal water management in 6.370 km² with sum of 1.650 km of state-owned water bodies. The land is mainly lowland with moderate hills on the perimeter. The number of settlements is 252 in which the number of the residents is beyond 700 000 persons. The Directorate plays a major role also in the work of Hungarian-Slovakian and Hungarian-Austrian Bilateral Water Committees based on inter-state agreements

The Directorate acts as the mandatory property manager of the water-related governmental water bodies and lands. It ensures the coordination between the public related, local municipality's and its own water-related development, maintenance and operation tasks. Including evaluation of water status and surface/groundwater water balances. Beyond this domestic this process it participates in the execution of EU Directives

The Directorate is the professional technical operator in case of potential risk of water damage: fluvial flood, excess water inundation, flash floods and local water damage, draught, water quality disasters, ice training. The protected flood prone land is about 1.400 km². The primary flood defense lines are 475 km long all together. There are more than 200 structures inbuilt, 87 of them have also inland drainage function. The Directorate is

running an extensive hydrometric monitoring system including the related forecast activities.

We maintain 142 km Danube section with the Szigetköz floodplain and the connected main rivers: Mosoni-Danube, Rába, Marcal, Rábca, Lajta.

Recent relevant events: 2013-2006-2002 Danube floods (highest ever recorded water levels exceeded in both), 2017 Danube icy floods, 2010 severe flash floods, 1996 Rába flood.

For this reason, we are specifically interested in the contents and results of CLIMAX PO, and we will support the project with the actions listed below:

- to take part to the stakeholder involvement process;
- to provide data, information and/or other relevant inputs to the definition and implementation of the case study;
- to share information and knowledge;
- to participate in project dissemination activities, helping in promoting and disseminating the project findings;
- to review the policy relevant results produced by the project.

By signing this letter of support, ÉDUVIZIG does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours Sincerely,




József Németh
director

Mestre Venezia, 01 aprile 2022
Prot. 0000450/22 - azGG

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

climaxpo@adbpo.it

OGGETTO: Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the ORDINE DEI GEOLOGI DEL VENETO confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled CLIMAX PO – “CLIMate Adaptation for the PO river basin district”.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

ORDINE DEI GEOLOGI DEL VENETO supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, ORDINE DEI GEOLOGI DEL VENETO does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Distinti saluti



Il Presidente
Dott. Geol. Giorgio Giacchetti

A handwritten signature in blue ink, appearing to read "Giorgio Giacchetti", is written over a horizontal line.

Rome, April 5, 2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75 - 43121 Parma
Italy

Letter of support to the LIFE “CLIMAX PO – CLIMate Adaptation for the PO river basin district” project

To whom it may concern,

By means of this letter, the **Italian Institute for Environmental Protection and Research (ISPRA)** intends to provide its support to the consortium of the LIFE “CLIMAX PO – CLIMate Adaptation for the PO river basin district” project, of which Autorità di Bacino Distrettuale del Fiume Po is the leader partner.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian National Adaptation Strategy (NAS) in the river basin district of the Po River.

ISPRA, which acts under the vigilance and policy guidance of the Italian Ministry for Ecological Transition (MiTE, former Italian Ministry of Environment), performs scientific and technological activities and researches of national interest in the field of the:

- Protection and control of the environment, including water resources, soil and land protection;
- Prevention, evaluation and mitigation of impacts, also due to climate changes and anthropic pressures;
- Nature conservation;
- Assessment of the quality of environment, habitats and biodiversity (protected areas and species);
- Evaluation and update of the inventories of environmental pressures;
- Sustainable use of natural and biological resources.

Moreover, the Institute coordinates the National System for Environmental Protection (SNPA), established by Italian Law No. 132/2016.

ISPRA provides technical and policy-related support to MiTE and to other governmental authorities responsible for the implementation of environmental policies (e.g., Regions, River Basin District Authorities) at national and international levels, including the Water Framework Directive 2000/60/EC, the Floods Directive 2007/60/CE and the Groundwater Directive 2006/118/EC. It also coordinates several national Committees and Networks, including the Italian National Committee for Operational Hydrological Services and the Italian National Committee for Operational Climate Services.

For this reason, the Institute is specifically interested in the contents and results of CLIMAX PO, and it will support the project with the actions listed below:

- Taking part to the stakeholder involvement process;
- Providing data, information and/or other relevant inputs to the definition and implementation of the case study;
- Sharing information and knowledge;
- Participating in the project dissemination activities, helping in promoting and disseminating the project findings;

- Reviewing the policy relevant results produced by the project.

By signing this letter of support, **ISPRA** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

IL DIRETTORE GENERALE

Dott. Alessandro Bratti



Ordine dei Geologi dell'Emilia-Romagna

Bologna, 4 aprile 2022
Prot. n. 215/2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Oggetto: Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

By means of this letter, the ORDINE DEI GEOLOGI DELL'EMILIA-ROMAGNA (OGER) confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

OGER supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, OGER does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Il Presidente
Geol. Paride Antolini





Ordine Nazionale dei Biologi

Via Icilio 7 - 00153 Roma
Tel. 06 57090200 – Fax: 06 57090234
www.onb.it - protocollo@peconb.it

Roma, 6 aprile 2022

Prot. 41153/2022

Spett. Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma – Italy
climaxpo@adbpo.it

e p.c. Spett. CNBA
ambiente@onb.it

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the ONB Ordine Nazionale Biologi - CNBA Coordinamento Nazionale Biologi Ambientali. Via Icilio, 7 00153 Roma; Via della Piramide Cestia 1/c, 00153 Roma (headquarters) After December 30th 2022: Ordini Regionali Biologi of the partner Regions - following the regionalization of the now national order confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

ONB Ordine Nazionale Biologi - CNBA Coordinamento Nazionale Biologi Ambientali supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, **ONB Ordine Nazionale Biologi - CNBA Coordinamento Nazionale Biologi Ambientali** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Awaiting reply to the email address ambiente@onb.it.

Yours faithfully,

Contact person :

Giovanni Luca Bisogni - ONB – Comitato Tecnico Scientifico - CNBA- Gruppo di Studio Ambiente Regione Lombardia +39 3880653499 - bisogni.biologo@gmail.com

Giovanna Fontana - ONB – CNBA - Coordinatrice Gruppo di Studio Ambiente Regione Lombardia + 39 3387061708 - giovanna.fontana@landmarkstudio.it.

IL PRESIDENTE

(Sen. Dr. Vincenzo D'Anna)





Assessorat des Finances, de l'Innovation,
des Ouvrages publics et du Territoire
Assessorato Finanze, Innovazione,
Opere pubbliche e Territorio

✉

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma – Italy
protocollo@postacert.adbpo.it

Aosta, 01.04.2022

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the Department of Planning, Water Resources and Territory (DPWRT) of Aosta Valley Regional Administration confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled CLIMAX PO – “CLIMate Adaptation for the PO river basin district”.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

DPWRT supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, DPWRT does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Raffaele ROCCO

Département de la programmation, des ressources hydriques et du territoire
Dipartimento programmazione, risorse idriche e territorio

11100 Aoste
2, rue Promis
téléphone +39 0165272787
télécopie +39 0165272646

11100 Aosta
via Promis, 2
telefono +39 0165272787
telefax +39 0165272646

difesa_suolo@regione.vda.it
difesa_suolo@pec.regione.vda.it
www.regione.vda.it
C.F. 80002270074



PROVINCIA AUTONOMA DI TRENTO

Dipartimento Territorio e Trasporti, ambiente, energia e cooperazione

Via Vannetti n. 32 – 38122 Trento

T +39 0461 492921

F +39 0461 493819

pec dip.taec@pec.provincia.tn.it

@ dip.taec@provincia.tn.it

web www.provincia.tn.it

Spett.le

Autorità di Bacino Distrettuale del Fiume Po

Strada Giuseppe Garibaldi 75

43121 Parma – Italy

protocollo@postacert.adbpo.it

climaxpo@adbpo.it

e pc. Spett.le

ing. Raffaele De Col

Dirigente generale

Dipartimento protezione civile, foreste e fauna

Spett.le

dott. Roberto Coali

Dirigente

Servizio bacini montani

Spett.le

ing. Stefano Fait

Dirigente

Servizio prevenzione rischi e centrale unica di emergenza

Spett.le

dott. Mauro Zambotto

Dirigente

Servizio geologico

L O R O S E D I

Trento, 04/04/2021

D338/2022/17.8-2019-2/ET

Numero di protocollo associato al documento come metadato (DPCM 3.12.2013, art. 20). Verificare l'oggetto della PEC o i files allegati alla medesima. Data di registrazione inclusa nella segnatura di protocollo.

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

Provincia autonoma di Trento

Sede Centrale: Piazza Dante, 15 - 38122 Trento - T +39 0461 495111 - www.provincia.tn.it - C.F. e P.IVA 00337460224

To whom it may concern,

 Associated with document Ref. Ares(2022)8672725 - 14/12/2022

By means of this letter, the “**Dipartimento Territorio e Trasporti, ambiente, energia, cooperazione (DTTAEC)**” of the Autonomous Province of Trento, confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled CLIMAX PO – “CLIMate Adaptation for the PO river basin district”.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

DTTAEC supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, **DTTAEC** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

The Autonomous Province of Trento (PAT) is particularly interested in this project because of its primary competences in the matters of climate and water. The most relevant strategic planning instruments in both matters, i.e. the future provincial Strategy for climate change mitigation and adaptation (that will be defined under the coordination of APPA thanks to the work programme "Trentino Clima 2021-2023") and the provincial Water basin plan (PGUAP ,2006 coordinated by Agenzia per le risorse idriche e l'energia (APRIE)), will be approved and renewed respectively in the next years, that is, during the CLIMAX PO project. Indeed, the results and the achievements of the project, as well as the collaboration activities among the partners and the observers' and stakeholders' network, could provide useful inputs.

Given these considerations, PAT would like to be actively involved in the project activities, mainly in WP2 ("Multilevel governance and coordination of funding") and WP3 ("Technical and methodological approach"), which correspond to two of the most relevant priorities

included in the National Climate Adaptation Strategy for the area of the hydrological Po basin: governance consolidation and development of management instruments for water resources. Due to the nature of its territory, PAT would also appreciate being chosen as a focal area for the project activities foreseen in particular by WP5 (called Water management): the management of water storage capacity while pondering multiple purposes of water uses, flood defense and other climate-associated risks.

The administrative structures involved are those of the Environmental Department, to which belong the Provincial Agency for Water Resources and Energy (APRIE) and the Provincial Agency for Environmental Protection (APPA), together with those of the Civil protection Department.

Yours faithfully,

IL DIRIGENTE GENERALE
- dott. Roberto Andreatta -

Questa nota, se trasmessa in forma cartacea, costituisce copia dell'originale informatico firmato digitalmente, predisposto e conservato presso questa Amministrazione in conformità alle Linee guida AgID (artt. 3 bis, c. 4 bis, e 71 D.Lgs. 82/2005). La firma autografa è sostituita dall'indicazione a stampa del nominativo del responsabile (art. 3 D.Lgs. 39/1993).

Saint-Christophe,

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the **Regional Agency for Environment Protection of Aosta Valley (ARPAVDA)** confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

ARPAVDA supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, **ARPAVDA** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

ARPA VDA Generale Director
- Igor Rubbo -



Milano li, **25 MAR 2022**
Prot. n.

CONSORZIO DEL TICINO
Ente Pubblico non Economico
ai sensi della legge 70/75

Alla Autorità di Bacino Distrettuale del Fiume Po
Via Garibaldi 75
43121 Parma

climaxpo@adbpo.it

e p.c. Prof. Pierluigi Claps
Politecnico di Torino
C.so Duca degli Abruzzi 24,
10129 TORINO

pierluigi.claps@polito.it

Oggetto: candidatura progetto LIFE ClimaxPO

In riferimento alla candidatura del progetto Life in oggetto questo Consorzio ribadisce il proprio interesse alla tematica e la propria disponibilità alla collaborazione ma comunica la propria indisponibilità al ruolo di partner.

A tale sofferta decisione si è giunti in relazione a diverse motivazioni di seguito brevemente riepilogate.

La sempre maggiore complessità della documentazione amministrativa-rendicontativa, da presentare non solo in fase di candidatura ma anche e soprattutto di partecipazione, nel caso di esito favorevole della candidatura stessa, che comportano un onere significativo per strutture tecnico-amministrative molto limitate come quelle dei Consorzi di regolazione dei laghi.

Gli impegni straordinari assunti dai Consorzi (importanti attività manutentive) proprio in questi anni che determinano notevole appesantimento e responsabilità aggiuntive rispetto all'attività ordinaria, sovraccaricando il limitato personale disponibile

Il fatto di non poter, di fatto, attivare collaborazioni esterne significative a cui assegnare lo svolgimento delle attività per la limitatezza dei budget disponibili, considerata anche la notevole durata prevista.

La volontà di non rallentare e/o ostacolare le attività del gruppo di lavoro con ritardi o mancanze in cui temiamo di incorrere.

La possibilità di fornire un contributo, sia in termini di confronto tecnico che di fornitura di dati, senza necessariamente assumere il ruolo di partner che comporta le sopra citate criticità.

Per quanto sopra evidenziato Vi confermiamo l'interesse nei contenuti e nei risultati attesi e la piena disponibilità a collaborare alla migliore riuscita dell'iniziativa stessa senza però il coinvolgimento diretto con ruolo di partner di progetto.

Con viva cordialità.

IL DIRETTORE
Doriana Bellani



REGIONE LIGURIA

DIPARTIMENTO AMBIENTE E
PROTEZIONE CIVILE



oorlig - r_liguri - Regione Liguria
Prot-2022-0262829
del 05/04/2022

*Allegati: -
Class/fasc:*

*Autorità di Bacino Distrettuale
del Fiume Po
PEC: protocollo@postacert.adbpo.it*

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the **Environmental and Civil Protection Department of Regione Liguria** confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

Environmental and Civil Protection Department of Regione Liguria supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.


By signing this letter of support, **Environmental and Civil Protection Department of Regione Liguria** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Environmental and Civil Protection Department
General Director
(Dott.ssa Cecilia Brescianini)



REGIONE TOSCANA
Giunta Regionale

 Associated with document Ref. Ares(2022)8672725 - 14/12/2022

**Direzione Difesa del Suolo e
Protezione Civile**

Tutela Acqua Territorio e Costa

Florence, 25 March 2022

Autorità di Bacino Distrettuale del Fiume Po
Strada Giuseppe Garibaldi 75
43121 Parma - Italy

Letter of support to the LIFE CLIMAX PO “CLIMate Adaptation for the PO river basin district”

To whom it may concern,

By means of this letter, the Region of Tuscany (RT) confirms its intent to support the consortium led by the Autorità di Bacino Distrettuale del Fiume Po for the proposal entitled **CLIMAX PO – “CLIMate Adaptation for the PO river basin district”**.

The project main objective is the implementation of adaptation actions to climate change through optimized management of water resources, in accordance with the Italian NAS (National Adaptation Strategy) in the district basin of the Po River.

RT supports the project as it agrees with its contents, objective and expected results in particular the strengthening of national and transnational governance, the promotion of climate change adaptation actions and improvement of the nature conservation.

By signing this letter of support, **RT** does not assume any financial obligations but demonstrates the willingness to cooperate with the consortium.

Yours faithfully,

Ing. Marco Masi
Responsible of Water, Territory and Coastal Protection Sector
Department of Soil Defense and Civil Protection
Region of Tuscany



50127 Firenze, Via di Novoli 26
Tel. 055-4384746
statec@regione.toscana.it

ANNEXES

PARTICIPANTS INFORMATION

PARTICIPANT INFORMATION

(To be filled in by the participants and uploaded as part of the application. To add information for more participants, copy the table as many times as necessary. This section is not bound by any page limit.)

| PROJECT | |
|----------------------------------|---|
| Project name and acronym: | Climate Adaptation for Po River Basin district – LIFE CLIMAX PO |

| PARTICIPANT 1 <i>(use same partner numbering as on Submission System screens).</i> | |
|--|--|
| Legal name (short name): | Autorità di Bacino Distrettuale del Fiume Po (ADBPO) |

| DESCRIPTION OF PARTICIPANT | |
|---|--|
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |

The Po River Basin District Authority (Po-RBDA) is a public body established by the State in 1990 (L.D. 152/2006 as amended by Law 28/12/2015, n.221) under the Ministry of the Environment, Land and Sea Protection.

Po-RBDA is competent for the implementation of River Basin Management Plan (DIR2000/60/EU -WFD), of Flood Risk Management Plan, (DIR2007/60/EU -FD), and for the implementation of EU Water Scarcity and Drought Policy (Blueprint to Safe Europe's Water, 2012) (Po Water Balance Plan), including issue of adaptation to climate change.

At a national level, Po-RBDA is entrusted for the drawing up of the "Basin plan", a single regulatory instrument which ensures coordinated actions at the basic unit of river basin for environmental protection and sustainable development for water depending on sectors.

The Po-RBDA's competence covers an area of 86.859 km², of which 82.788 in Italy. The Secretary General, together with national ministries and Presidents of nine administrative Regions within district boundaries, is member of the Permanent Institutional Conference, the political addressing body, chaired by the Minister of the Environment.

Po-RBDA operates as a promoter of governance across the whole RBD, as a place of unitary agreement and planning choices among all institutional and private bodies representatives of environment, economic sectors and stakeholders, cooperating for the sake of safeguarding and sustainable using of water resources.

The IT National Adaptation Strategy to Climate Change (IT NAS) identifies the Po district as a special case for climate adaptation for water sector, Po-RBDA being the designated subject for the implementation.

Po-RBDA has a longstanding experience and skills on implementation of large scale, international and national projects and plans. Po-RBDA has contributed to various European projects including LIFE, Horizon 2020, ENPI, Cross Border Cooperation in the Mediterranean (ACCBAT) and others and participated in many other projects as stakeholder.

| KEY STAFF | |
|--|--|
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |

[Colombo] [Andrea], [male], [Head], [engineer]

Head responsible for the technical area and the Assessment and Management of Hydraulic Risks Sector, he is responsible for the implementation of the Flood Directive at the level of the Po River Basin District through the Flood Risk Management Plan.

[Moroni] [Fernanda], [female], [Head], [biologist]

Head in charge of the Planning and Management of Water Resources Sector, she is responsible for the implementation of the Water Framework Directive at the level of the Po River Basin District through the Water Management Plan.

[Segalini] [Marta], [female], [Head], [economist]

Manager in charge of the Administrative Sector, she deals with protocol and general services, as well as the management of human resources and activities related to accounting, bursar and contracts.

[Braga] [Roberto], [male], [staff category], [engineer]

In the Authority, he mainly deals with the monitoring of water resources in the Po River basin district within the Permanent Observatory on water uses aimed at preventing and managing situations of water shortage.

[Brian] [Marco], [male], [staff category], [environmental engineer]

Within the Authority he deals with modelling aimed at managing the water resource; he also dealt with the development of habitat models relating to river environments, with reference to endangered species. He also collaborates in the management and development of European projects.

[Leoni [Paolo], [male], [staff category], [environmental engineer]

Within the Authority he deals with modelling aimed at managing the water resource; he also dealt with the development of habitat models relating to river environments, with reference to endangered species. He also collaborates in the management and development of European projects.

[Montecorboli] [Chiara], [female], [staff category], [environmental scientist]

Within the Authority she works on the issues of quantitative management of water resources with a focus on the issue of ecological flow and habitat modelling in the implementation of the Water Framework Directive.

[Ziccardi] [Selena], [female], [staff category], [environmental scientist]

Within the Authority she works on the management and development of European projects; she also dealt with the development of habitat models relating to river environments, with reference to endangered species.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

LIFE11 NAT/IT/188; CON.FLU.PO.;2012; € 3.406.809,00 55 + 12 proroga; Regione Lombardia; Regione Emilia-Romagna, Agenzia Interregionale per il fiume Po, AdBPo, Consorzio Parco Lombardo della Valle del Ticino, Provincia di Piacenza e Rovigo, GRAIA S.r.l.

LIFE11 ENV/IT/156 (Environment Policy and Governance); A model to reclaim and reuse wastewater for quality crop production (ReQpro); 2012; € 698.600,00 (cofinanziamento: 49,72%); 60; Centro Ricerche Produzioni Animali – C.R.P.A. S.p.A.; IREN Emilia S.p.A., Consorzio di Bonifica dell'Emilia Centrale, AdBPo. Co-financier: IREN Acqua Gas, Provincia di Reggio Emilia.

LIFE13 NAT/IT/001129 (Nature 2013); Conservation and management of *Barbus meridionalis* and *Barbus plebejus* in the Emilian tributaries of Po (Life Barbie); 2014; € 2.189.378,00 (cofinanziamento: 49,97%); 48; Università degli studi di Parma; AdBPo, Consorzio Mario Negri Sud, Ente di Gestione per i Parchi e la Biodiversità, Spin Off Gen Tech S.r.l., Ente Parco nazionale dell'Appennino tosco-emiliano.

HORIZON-CL5-2021-D1-01-08; REstoration of WETlands to minimise emissions and maximise carbon uptake – a strategy for long term climate mitigation (REWET); 2021; €6,604,853; 48; IDENER RESEARCH & DEVELOPMENT AGRUPACION DE INTERES ECONOMICO, UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION –UNESCO, KNEIA SL, UNIVERSITAET FUER BODENKULTUR WIEN, FUNDACION PARA LA INVESTIGACION DEL CLIMA, STICHTING WAGENINGEN RESEARCH, OULUN YLIOPISTO, ITA-SUOMEN YLIOPISTO, WETLANDS INTERNATIONAL - EUROPEAN ASSOCIATION, Stroming BV, BAX INNOVATION CONSULTING SL, STICHTING IUCN NEDERLANDS COMITE, KATHOLIEKE UNIVERSITEIT LEUVEN, TARTU ULIKOOL, AUTORITA' DI BACINO DEL FIUME PO, UNIVERSITA DEGLI STUDI DI PARMA, REMOTE SENSING SOLUTIONS GMBH, UNIVERSIDADE DE EVORA, Câmara Municipal de Alpiarça.

Interreg-Central Europe; joint Efforts to increase water management Adaptation to climate CHanges in central EuRope (TEACHER-CE); 2020; € 1.316.179,89; University of Ljubljana, University of Natural Resources and Life Sciences (Vienna), Federal Research and Training Centre for Forests, Natural Hazards and Landscape, Czech University of Life Sciences (Prague), Saxon State Office for Environment, Agriculture and Geology, INFRASTRUKTUR & UMWELT Professor Böhm und Partner, Middle Tisza District Water Directorate, Middle Tisza District Water Directorate, Po River Basin District Authority, Euro-Mediterranean Center on Climate Change Foundation, Warsaw University of Life Sciences, Institute of Meteorology and Water Management - National Research Institute, Global Water Partnership Central and Eastern Europe

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 2 <i>(use same partner numbering as on Submission System screens).</i> | |
| Legal name (short name): | Agenzia Interregionale per il fiume Po (AIPO) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>The Interregional Agency for the Po River (AIPO), established in 2003 with four laws approved by the Councils of the Po Regions: Piedmont, Lombardy, Emilia-Romagna, Veneto, is an instrumental body of these Regions and collects the legacy of the dissolved " Magistrato per il Po", a state body created in 1956.</p> <p>AIPO takes care of the management of the main hydrographic network of the catchment area of the Po river, the largest Italian basin, essentially dealing with hydraulic safety, state-owned water and river navigation. AIPO is promoting a change in design to achieve the objective of hydraulic safety through integrated river restoration interventions. AIPO has territorial competence in specific areas of the hydrographic network, related embankments and hydraulic works, is present throughout the Po valley and for CLIMAX PO will provide its specialist support in task 6.3 - "Emblematic intervention for adaptation to climate change: Lambro Selvaggio.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Marco] [La Veglia], [male], [Executive], [Master degree in Hydraulic engineering]</p> <p>Planning, realisation and management of public engineering works for hydrogeological risk mitigation, hydraulic modelling, in coherence with institutional mission of AIPO</p> <p>[Sabrina] [Canali], [female], [Senior Technician], [Master degree in Environmental Engineering]</p> <p>Planning, realisation and management of public engineering works for hydrogeological risk mitigation, river restoration, hydraulic modelling</p> <p>[Nicola] [Cifù], [male], [Junior Technician], [Master degree in Hydraulic Engineering]</p> <p>Support to planning and realisation of public engineering works for hydrogeological risk mitigation, river restoration, hydraulic modelling</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| Implementation of the "Seveso plan" concerning the planning and realisation of 4 flooding water storage areas, at the time being under construction | |
| AFFILIATED ENTITIES / ASSOCIATED PARTNERS | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
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| Participant 3 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Agencia per la Prevenzione, l'Ambiente e l'Energia dell'Emilia-Romagna (Arpae) |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| Technical expert for Emilia-Romagna Region; leader of task 7.1 pilot action; Support to CMCC in technical and methodological approach (WP3); support to task 7.2 pilot action; support to task 7.3 pilot action | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Pier Paolo] [ALBERONI], [M], [Dir], [Meteorologist] Project management; Expert in quantitative precipitation estimation with weather radar</p> <p>[Cinzia] [ALESSANDRINI], [F], [Dir], [Environmental scientist] Project management; Expert in droughts and water resource management</p> <p>[Elisa] [COMUNE], [F], Dir, [Engineer] Project management; Expert in hydrological monitoring, modeling and measurement supporting flood/low flow management</p> <p>[Sandro] [NANNI], [M], [Dir], [Meteorologist] Management. Hazard evaluation; weather warnings; impacts of extreme weather events.</p> <p>[Andrea] [VALENTINI], [M], [staff category], [Engineer] Coordinator for Arpae of Task 7.3 and marine and coastal expert</p> <p>[Giuseppe] [RICCIARDI], [M], [senior expert], [Engineer] senior hydrological expert in monitoring modeling, measurement and reporting</p> <p>[Rodica] [TOMOZEIU], [F], [senior expert], [physician] senior climatological expert. expert in climate modeling</p> <p>[Valentini] [PAVAN], [F], [senior expert], [physician] senior climatological expert, expert in seasonal forecast</p> <p>[Gabriele] [ANTOLINI], [M], [senior expert], [Environmental scientist] senior climatological expert, expert in climatological index</p> <p>[Giulia] [VILLANI], [F], [senior expert], [agronomist] senior agrometeorological expert, expert in agrometeorological modeling</p> <p>[Silvia] [UNGUENDOLI], [F], [junior expert], [Engineer] marine and coastal expert</p> <p>[Alessandro] [ALLODI], [M], [staff category], [geologist] senior hydrological expert, expert in monitoring, modeling, measurement and stage-discharge equations</p> <p>[Davide] [CESARI], [M], [DS3], [Meteorologist; Numerical modellers] Management and use of limited area model for weather forecasting.</p> <p>[Virginia] [POLI], [F], [D], [Radarmeteorologist] Radarmeteorologist; nowcasting based on radar data; blending of radar nowcasting and numerical weather prediction products.</p> <p>[Anna] [FORNASIERO], [F], [D1], [Radarmeteorologist]</p> | |

Radarmeteorologist, Quantitative precipitation estimate based on radar data.

[Chiara] [CARDINALI], [F], [D], [Radarmeteorologist]

nowcasting based on radar data; Use of artificial intelligence methodology for nowcasting.

[Thomas] [GASTALDO], [M], [D], [Numerical Modellers]

Use of limited area model for weather forecasting. Data assimilation expertise for rapid update cycle in NWP.

[Fabrizio] [PIZZOTTI], [M], [D3], [Radarmeteorologist]

Management and maintenance of radar device

[Giulia] [CAIANI], [F], [D1], [economist]

Financial management

[Luisella] [IERVOLINO], [F], [C], [accountant]

Support to financial management

Projects or Activities

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

1) Progetto LIFE RAINBO <https://www.rainbolife.eu/>

2) Progetto LIFE + PRIMES <http://www.lifeprimes.eu/index.php/il-progetto/>

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 4 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Agenzia Regionale per la Protezione Ambientale del Piemonte (ARPA Piemonte) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>The Regional Agency for the Environmental Protection of Piedmont (ARPA Piemonte) is a public body with independent status for administrative, technical-judicial, asset management and accounting purposes. It operates under the oversight of the Chairman of the Executive Committee of the regional government so as to ensure compliance with the national and regional policies in the fields of environmental protection and natural risk monitoring, forecasting and prevention.</p> <p>The institutional duties of the Agency are established by national and regional regulations in application of the EU Programmes. It assures technical-scientific support in the environmental fields and carries on advisory activities for the institutional entities.</p> <p>ARPA Piemonte is established at territorial level, it has roughly 1000 employees, most of whom with technical-scientific expertise, employed in laboratory activities, monitoring, production of environmental services and in local environmental protection actions, including the support in climate change policies definition.</p> <p>The activities are focused mainly on the air quality, water, soil, waste and contaminated or micro pollutant sites, nature and biodiversity, noise and radiation, technological risk, meteorology, hydrology and natural risk. In particular the Natural and Environmental Risks Department carries out processes related to the monitoring, systematic study, organization and dissemination of information associated to the physical and chemical elements of the environment of the Piedmont region, aimed to the forecasting and preventing the natural and the environmental risks. A huge monitoring station network, remote sensing instruments together with the deep expertise in data processing and modelling, allow the continuous surveillance of the environment and the territory, the forecast and warning systems management for severe events and the updating on a continuous basis the climatological dataset for the climate change assessment and projections.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Secondo Barbero], [M], [head of department], [Director of the Natural and Environmental Risks Department]</p> <p>Secondo Barbero has been working for the Meteo-hydrographical and Survey Unit for Flood Forecasting and Prevention for Regione Piemonte since 1996. Responsible for a special hydrological task force group, he is a main promoter for the design and management of the regional real-time network of meteorological and hydrometrical measurement stations. He is a key figure in the operative group controlling the regional meteorological risks assessment and alert system and the project manager of the development of a regional operational system for flood forecasting. Since 2018 Director of the Natural and Environmental Risks Department composed of three Structures (Meteorology, climate and air quality - Hydrology and water quality -Monitoring and geological studies). Author of more than 30 papers concerning hydrology, river hydraulics, environmental, flood warning system, hydrological monitoring planning and risk management.</p> | |
| <p>[Roberto Cremonini], [M], [technical expert], [Responsible for regional meteorological and climatological service]</p> <p>Physician at University of Turin in 1993, since 1998 he started to work as meteorologist and, on the following, for ARPA Piemonte, he become the responsible for management and development of weather radars and remote sensing instrumentation of the regional observing system, developed for Civil Protection aims. On 2007, within the Alcotra project FRAMEA, he developed the first mobile polarimetric X-band radar. Project manager and scientific responsible for National and European projects, focused on weather radars and satellites (QUITSAT, PROMOTE, FRAMEA e CRISTAL), on 2010 he became the coordinator for WP Weather Radar New Technologies within EU project Opera. Responsible for the regional operational rooms for natural risks. Since 2014 he developed automatic real-time warnings system for floods and severe thunderstorms by Web Campaign System, App and social media. He is also become responsible for the regional meteorological and climatological service in Piemonte and Lecturer of Meteorology at University of Torino, Italy, since 2009.</p> | |
| <p>[Maria Graziadei], [F], [technical expert], [Hydraulic Engineer]</p> <p>Main activities: forecasting, control and modelling of hydrogeological factors for the purpose of preventing and</p> | |

forecasting natural risks and protecting the environment; guidance and coordination activities for the systematic survey, study, analysis of the physical environment and climate; hydrological and hydraulic assessments, meteo-hydro monitoring; hydrological balance analysis; production of non-standard meteo-hydrographic forecasting services, forecasting services for the alert system, indicators for the assessment of water availability, water resource indicators.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

49-3-3-AT C3-Alps (Alpine Space Programme), 2011, € 3.117.291, 36 months. Project leader: Environment Agency Austria (UBA). Partners: Arpa Piemonte et al. (Task 3.2 CLIMAX PO project)

LIFE15IPEIT013, PREPAIR, 2015, € 9.974.624, 84 months. Project leader: Regione Emilia-Romagna. Partners: Arpa Piemonte et al. (Task 3.2-3.3 CLIMAX PO project)

LIFE17 ESC/IT/000002, VisPO, 2017, € 488.422, 36 months. Project leader: Legambiente Piemonte Valle d'Aosta. Partners: Arpa Piemonte et al. (Task 3.2-5.2 CLIMAX PO project)

Project GESTISCO (Interreg VA ITA-CH), 2018, € 1.583.410, 49 months. Project leader: Regione Lombardia – Cantone Ticino. Partners: Arpa Piemonte et al. (Task 7.2 CLIMAX PO project)

Project HIGHLANDER 2018-IT-IA-0084 (Connecting Europe Facility 2014-2020), 2018, € 5.430.427, 36 months. Project leader: CINECA. Partners: Arpa Piemonte et al. (Task 3.2 CLIMAX PO project)

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 5 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Alma Mater Studiorum – Università di Bologna (UNIBO) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>The Alma Mater Studiorum – Università di Bologna, the oldest university in the Western world, paves the way for innovation through an increasingly rich courses catalogue, cutting-edge research, a constant and increasingly broad international perspective and a strong third mission. With five campuses (Bologna, Cesena, Forlì, Ravenna, Rimini) and a branch in Buenos Aires, it offers a diversified courses catalogue that is tailored to the needs of present-day society: over 200 degree programmes among its 32 departments and 5 schools are offered to over 87,000 students. 3,600 graduates are enrolled in PhDs and other 3rd-cycle programmes. More than 2800 researchers and more than 2900 administrative staff are permanently employed. Ranked in the top 200 on the two most prestigious international university rankings, considered the leading university in Europe for student mobility (Erasmus+), 1° Italian university (6° in Europe) in H2020 bioeconomy sector and among the best Universities under the LIFE programme (11 projects, 4 coordinated, in the last programming period), the Alma Mater invests in sustainable development and contributes to the achievement of the 17 sustainable development goals proposed as part of the 2030 Agenda adopted by the General Assembly of the United Nations. The three main missions are High Level Instruction, Research and Dissemination of knowledge in the interaction with the territory, including Industry. Only the H2020 funded projects create networks with over 3000 partners, 1600 of which are private. The research Groups involved in the Climax Po proposal are part of the Alma Climate inter-departmental centre of UNIBO, with experience ranging from modelling and forecast to social impact and communication.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Silvana] [Di Sabatino], [F], [full professor], [PHD]</p> <p>Full professor of physics, her research interests are aimed in particular at understanding the physical processes underlying weather and climate forecasting models. She is the scientific coordinator of the green deal project I-CHANGE and H2020 OPERANDUM</p> | |
| <p>[Nadia] [Pinardi], [F], [Full professor], [Ph.D. in Applied Physics from Harvard University]</p> <p>Full professor of Oceanography at Bologna University, her interests range from ocean numerical modelling and predictions to data assimilation, numerical modelling of the marine physical-biological interactions and pollutants at sea. The last topic of her research is the analysis of climate indices in the Mediterranean Sea</p> | |
| <p>[Marco] [Castrignanò], [M], [Full professor], [sps/10 Territorial and Environmental Sociology]</p> <p>member of the Department of Sociology and Business Law, University of Bologna. PhD in Sociology and social policies, his expertise concerns methods and techniques of social research on territorial context</p> | |
| <p>[Alessandra] [Landi], [F], [Associate Professor], [sps/10 Territorial and Environmental Sociology]</p> <p>member of the Department of Sociology and Business Law, University of Bologna. PhD in Sociology, her expertise concerns environmental studies and sociological analysis of climate crisis.</p> | |
| <p>[Attilio] [Castellarin], [M], [Full Professor], [Editor in Chief of Hydrological Sciences Journal]</p> <p>He holds expertise in many field of hydrology; he has a strong scientific background on flood hazard and risk assessment and mapping, hydrodynamic modelling, flood damage modelling, regional frequency analysis of extreme hydrological events. Author and co-author of more than 100 documents indexed in Scopus (h-index 38).</p> | |
| <p>[Valentina] [Gianfrate], [F], [associated professor], [Associate Professor in Service Design and lecturer at the Advanced Design Master's Degree Course]</p> <p>Her fields of expertise are: advanced design approach to support urban transformations through multi-stakeholders collaboration, co-design of urban accessibility and inclusiveness, design for preparedness. She is involved in the development of International projects about Energy Communities and in educational cross-city programs about design for responsible innovation.</p> | |
| <p>[Federico] [Porcù], [M], [associated professor], [PhD]</p> <p>He has a 30-year experience in satellite and radar remote sensing of precipitation, with application to agriculture, climatology, prevention and mitigation of hydro-geological disasters. He also studies precipitation microphysical</p> | |

structure and precipitation estimation by opportunistic sensors (microwave links).

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

OPERANDUM OPEN-air laboRatories for Nature based solUtions to Manage environmental risks – Horizon 2020, UNIBO coordinator

I-CHANGE Individual Change of HABits Needed for Green European transition – Horizon 2020, UNIBO partner

ADRIACLIM - Climate change information, monitoring and management tools for adaptation strategies in Adriatic coastal areas – Interreg Italy-Croatia , UNIBO partner

SYSTEM-RISK “A Large-Scale Systems Approach to Flood Risk Assessment and Management” a EU funded training network (call H2020-MSCA-ITN-2015).

SaferPLACES "Improved assessment of pluvial, fluvial and coastal flood hazards and risks in European cities as a mean to build safer and resilient communities" (funded by EU EIT through Climate-KIC, Task ID EIT_2.2.11_210054_P125_1A)

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 6 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | ASSOCIAZIONE NAZIONALE CONSORZI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE (ANBI) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ANBI was established in 1928 as a mandatory National Association. In 1947, the Association received juridical recognition (Dcps 10 July 1947, n. 1442) as Voluntary association with legal identity. The current statute, approved in 2015, it defines the institutional mission of the Association: raise public and policy makers awareness about the role of land reclamation and irrigation as an important public action for territories and waters protection, defence and enhancement. Italian Agricultural Water Board (ConSORZI di Bonifica) are private self-governing bodies of public interest. Currently, more than 140 consortia are members of ANBI, covering more than 50% of the country for a total of about 17 million hectares. All the plains and the most productive agricultural areas, as well as the main cities, are served by ANBI associates. ANBI is supplying water to 81% of the irrigated agriculture in Italy, close to one fourth of all Europe. The Association is Member of the European Union of Water Management Associations (EUWMA) and is a Founding Member of Irrigants d'Europe, which it brings together the irrigation associations of Italy, Spain, Portugal and France. ANBI collaborates with numerous public and private institutions for activities of common interest through agreements and conventions, among them the Italian Government Extraordinary Commissioner for contrast to illegal landfills, Terna (energy company), Coldiretti (farmers' association), Bonifiche Ferraresi Spa (large industrial farms), and Consorzio del Canale Emiliano Romagnolo (R&D). The Association, by itself or through Regional ANBI, carries out technical assistance to its own associated; organises research and studies on the most relevant and topical issues for the agricultural water governance and irrigation sector; organises conferences, meetings and debates for the in-depth study of the problems of the agricultural water sector; promotes and facilitates education, training and capacity building activities directed internally or towards school pupils, universities, decision makers.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| Caterina Truglia, Female, Director, ANBI Vice-Director | |
| <p>Truglia holds degree in Law. She has experience in managing EU projects aiming to end user information and awareness raising. Truglia oversees ANBI relations with other sister associations and international organisations. Truglia is also in charge of the legal aspect of water management, climate adaptation, and of the interrelations with Italian authorities.</p> | |
| Alessandra Bertoni, Female, Employee, Communication Officer | |
| <p>Bertoni is Press and communications officer, expert social media manager with 6 years of experience in the field. Over time, she has been involved in the management of activities related to communication, favouring an important growth of the social pages, reaching all the foreseen dissemination targets. In particular, she has worked in support of corporate strategies aimed at increasing knowledge of the areas of the reclamation consortia, implementing the existing ones with new activities. Bertoni created over 500 audio and video text content for the company's website and social media and supervised the content of audio activities with proofreading and support in achieving compliance with schedules. At the head of the digital newsstand-agenda, she created social publishing strategies that have led to an increase in views. She managed creative social campaigns with the publication of numerous contents on the occasion of the "Obiettivo Acqua" photo contest with assistance to media appointments for the dissemination of associative activities.</p> | |
| Gabriella Di Filippo, Female, Employee, Communication Officer | |
| <p>Di Filippo participated in several projects on the protection of the territory and irrigation water and the safeguarding and monitoring of the areas of land reclamation. She has over than 10 years of experience in national projects. Her more recent professional experience at ANBI was to contribute to the implementation of national projects in the frame of national and EU funding schemas. Gabriella has experience in data monitoring, analysis and management control processes, and to define processes and procedures aimed at outlining an efficiency of the management system.</p> | |
| Adriano Battilani, Male, Research, Researcher | |
| <p>Battilani carries out research on crop water requirements and irrigation modelling and DSS, the circulation and accumulation of fertilisers, plant protection additives and herbicides in soil and water, water reuse and irrigation water quality. He was in charge of pre-normative studies for the reuse of treated wastewater in agriculture and landscape (Emilia Romagna Region). Since 1990, He has been involved as Work Package Leader or Scientific Manager in EU projects tackling water/irrigation management and reuse in agriculture. He is the author of more than 250 papers</p> | |

(scientific, proceedings and vulgarization). He was invited keynote speaker, appointed as session chairperson, scientific committee member in more than 90 international symposiums and workshops. He was elected chairperson of the “Water Supply-Irrigation” section of the International Society of Horticultural Science (ISHS) for two consecutive terms. He was appointed member of the European Innovation Partnership on Water (EIP water) Task Force as representative of the European Farmers’ and Agri-Cooperatives Association (Copa-Cogeca) and the Italian Association of Land and Water Reclamation Board (ANBI). He was the coordinator of the EIP Water Action Group (AG112) WIRE (Water & Irrigated agriculture Resilient Europe). He is Secretary General of the international association Irrigants d’Europe, grouping the largest association managing water in agriculture. He is member of the Board of Directors of the Euro-Mediterranean Irrigators Community, which associates represents public and private bodies managing water in agriculture also in North Africa e Middle East. He is representing ANBI in sein of the European Water Manager Association (EUWMA). He is member of the EIP Agri Focus Group 46 – “Nature-based solution for water management under climate change”. He is member of the WFD CIS-WG Water Reuse.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

Alpine Drought Observatory – ADO: Interreg Alpine Space Priority 3 - Liveable Alpine Space. ADO aim is to set up an Alpine Drought Observatory (ADO) and to derive recommendations for improved risk preparedness and efficiency of drought management, specifically, for the Alpine territory. The ADO itself will be a transnational Alpine-wide operational system with a web-interface (e.g. WebGIS, periodic reports) <https://keep.eu/projects/23262/Alpine-Drought-Observatory-EN/>

AGRI 2015/0227, INFOPAC: EU project dedicated to information, training, communication, and dissemination of water related topics in the CAP 2013-2020

MEDWAYCAP: The MEDiterranean pathWAY for innovation CAPitalisation toward an urban-rural integrated development of non-conventional water resources Project aims to facilitate general access and promotion of best practices which include the improvement of treated wastewater reuse as a non-conventional water resource (NCWR) that can contribute to mitigating local water shortage. ANBI is associated to IAM-CIHEAM.

Inno2Hub: ANBI is in charge of the secretariat of the think tank Inno2Hub, grouping private companies, universities, research centres and associations with the aim to boost innovation uptake in the sectors of agriculture water governance and irrigation.

Irriframe platform: developed by Water Boards Italian Association (ANBI) aiming to ensure an efficient use of water resources in the agricultural sector. [https:// www.irriframe.it/Irriframe](https://www.irriframe.it/Irriframe).

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| Participant 7 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC Foundation) |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>The Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (Fondazione CMCC) is a non-profit research institution (www.cmcc.it). CMCC's mission is to investigate and model our climate system and its interactions with society to provide reliable, rigorous, and timely scientific results, which will in turn stimulate sustainable growth, protect the environment, and develop science driven adaptation and mitigation policies in a changing climate. CMCC collaborates with experienced scientists, economists, and technicians, which work together in order to provide full analyses of climate impacts on various systems such as agriculture, ecosystems, coasts, water resources, health, and economics. CMCC also supports policymakers in setting and assessing costs, as well as in designing mitigation and adaptation policies.</p> <p>The CMCC network is structured through different offices in Lecce, Bologna, Capua, Milan, Sassari, Venice and Viterbo. It involves and links private and public institutions jointly investigating multidisciplinary topics related to climate science research. CMCC benefits from the extensive applied research experience of its members and institutional partners: Istituto Nazionale di Geofisica e Vulcanologia (INGV); Alma Mater Studiorum - Università di Bologna; Università del Salento; Centro Italiano di Ricerche Aerospaziali (CIRA S.c.p.a.); Università Ca' Foscari Venezia; Università di Sassari; Università della Tuscia; Politecnico di Milano, Resources for the Future (RFF).</p> <p>In recent years, it has carried out different research initiatives over the domain of interest aimed at assessing the potential impact of climate change on frequency and magnitude of geo-hydrological impacts (e.g. river/pluvial flooding). Furthermore, it has developed several Decision Support Tools (e.g. GOWARE http://proline-ce.fgg.uni-lj.si/goware/; CC-ARP-CE https://teacher.apps.vokas.si/home) fully designed and validated over the Po River Basin. Among its assets, DATACLIME Platform has proven to effectively support risk analysis to cope with weather induced hazards and the identification of protection measures. It has carried out very high resolution (about 2km) atmospheric simulations over Italy related to recent decades and for future time spans very useful for different impact evaluations. Then, CMCC will lead: the Task 3.2 aimed at developing a Platform collecting different data sources (included that developed by CMCC) supporting the impact analysis over the test cases; WP7 "Defense and Water Infrastructure" including three different activities related to the implementation of soft (early warning systems) and grey protection measures.</p> | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>Jaroslav Mysiak, Male, RAAS Division Director, Senior Researcher. He is the director of the research RAAS division 'Risk assessment and adaptation strategies', and external teacher at the Ca' Foscari University of Venice. Jaroslav's research focusses on risk assessment and governance, including behavioural responses to risks and risk-reduction measures, risk perception and transformational social change, environmental economics, sustainable finance, climate adaptation and services.</p> <p>Antonio Trabucco, Male, Senior Research at IAFES Division. He is a member of the IAFES Division (Impacts on Agriculture, Forests and Ecosystem Services) at CMCC. He is currently involved at CMCC with large data coupling processes and climate services modeling of interactions between climate, hydrology and vegetation (crop productivity and ecosystem services) and sustainable development goals.</p> <p>Valentina Mereu, Female, Research at IAFES Division. She is a member of the IAFES Division (Impacts on Agriculture, Forests and Ecosystem Services) at CMCC. Her field of expertise is modeling and analyzing agricultural systems under present and future climate conditions and evaluation of adaptation and mitigation strategies.</p> <p>Marta Debolini, Female, Research at IAFES Division. She is a member of the IAFES Division at CMCC. She works on land use change modeling, analysis of agricultural and farming system dynamics and on the impacts of farming/landscape processes on water management and utilization. She also focus on the possible land and water management strategies for the adaptation to climate change.</p> <p>Sara Masia, Female, Research at IAFES Division. She is a member of the IAFES Division (Impacts on Agriculture, Forests and Ecosystem Services) at CMCC. Sara is a researcher in systems modelling and analysis. Her research focuses on modelling and assessing crop water requirements under climate change conditions. Sara has experience in developing system dynamics modelling for assessing interlinkages and exploring synergies and trade-offs between agriculture, climate, water, energy, and ecosystems through a holistic lens (Nexus approach).</p> <p>Raniero Della Peruta, Male, Research at IAFES Division. He collaborates with the IAFES Division (Impacts on Agriculture, Forests and Ecosystem Services) at CMCC. He is currently working on modelling the impacts of climate</p> | |

change on tropical crops, with the aim of evaluating possible adaptation strategies.

Paola Mercogliano, Female, REMHI Division Director, Senior Researcher. She is the director of the research division REMHI (Regional Model and geo-Hydrological Impacts) and she is also adjunct Professor at the University of Naples "Parthenope". Her main areas of competence include: development and use of statistical tools and dynamical models for localization of the weather condition and climate change scenarios up to local scale, development of tools for the qualitative and quantitative analysis of the soil impact induced climate change.

Guido Rianna, Male, Senior Research at REMHI Division. He is a member of the REMHI Division (Regional Model and geo-Hydrological Impacts) at CMCC, he is responsible for Unit Research concerning geological and hydrological impacts induced by climate changes in REMHI Division.

Giuliana Barbato Female, Senior Research at REMHI Division. Expert on developing post-processing tools for the analysis of climate data of different types (simulated, in situ and satellite). Good knowledge of satellite data analysis, useful for supporting hazard monitoring and assessment, through the use of software to manage data provided by different platforms and sensors.

Giovanni Coppini, Male, OPA Division Director, Senior Researcher. He is the director of the research OPA division 'Ocean Predictions and Applications'. His field of expertise is oil spill emergency management at sea and development of environmental and climate change ocean indicators based on operational oceanography observations, modelling products and climate re-analyses.

Giulio Galluccio, Female, ISCD Division Director, Senior Researcher. She is the director of research ISCD division 'Information Systems for Climate science and Decision-making'. She directly coordinates and manages successful proposals, supporting the efficient and effective implementation of planned research activities and she pursues at CMCC her research interest on climate finance and project financing mechanisms.

Eugenio Sini, Male, Junior Scientific Manager at ISCD Division. He is currently a PhD candidate for the "Future Earth, Climate Change and Societal Challenge" course at the University of Bologna. His research focuses on the assessment of the climate change adaptive capacity of institutions. At CMCC Foundation he has worked on several projects in the field of climate change adaptation (ETC-CA, PNACC, ADAPT, Un Filo Naturale), support to public administrations (Regional Strategies for Sustainable Development of Lazio and Molise).

Chiara Trozzo, Female, Senior Scientific Manager at ISCD Division. She works on several research projects on negative emission technologies, adaptation to climate change and sustainable development decision-making and policy elaboration at European and local level.

Mauro Buonocore, Male, IPSO Division Director, Senior Researcher. He is the director of IPSO division 'Innovative Platforms for Science Outreach' and he is also Head of the Communication and Media Office, he coordinates the communication activities including the development of online and offline communication strategies, the management of media contact, the dissemination activities and the editorial activities of the magazine Climate Foresight.

Projects or Activities

List of up to **5 relevant previous projects** or activities, connected to the subject of this proposal.

NEXOGENESIS - Facilitating the next generation of effective and intelligent water-related policies utilising artificial intelligence and reinforcement learning to assess the water-energy-food-ecosystem (WEFE) nexus (H2020, 2021-2025). Facilitating the next generation of effective and intelligent water-related policies utilising artificial intelligence and reinforcement learning to assess the water-energy-food ecosystem (WEFE) nexus. NEXOGENESIS offers a coherent WEFE nexus framework for the assessment of potential impact pathways of implementing new policy objectives (WFD, RED, CAP, SDGs, Paris Agreement) in the nexus, including: (i) biophysical and socio-economic modelling; (ii) stakeholder engagement together with; (iii) validation of NEXOGENESIS outputs and; (iv) use of the latest artificial intelligence techniques.

TEACHER CE joint Efforts to increase water management Adaptation to Climate Changes in central EuRope (Interreg CE, 2020 - 2022). The main territorial challenge to be addressed concerns the development of effective adaptation processes and prevention of weather-induced risks for water management in Central Europe, where the effects of climate changes can be already clearly observed and, in future years, could have strong impact at territorial level

Highlander (CEF Programme, 2019 – 2022). For a smarter management of lands, studying new sectors enabled by emerging technologies interested in reducing risks on human health, forests, agriculture and livestock production. Through the use of High Performance Computing, HIGHLANDER project aims at reducing risks associated with climate change by processing data and obtaining accurate climate forecasts and projections, achieving the goal of having a smarter and sustainable management of natural resources and of the territory.

ETC CCA European Topic Centre on Climate Change impacts, vulnerability and adaptation 2011-2021; European Topic Centre on Climate Change Adaptation and LULUCF 2022-2026 (European Environment Agency EEA). It is a

Consortium of European Organizations contracted by the EEA to carry out specific tasks consistently with the EEA strategy and Multiannual Work Programme and the specific EEA Annual Work Programmes in the area of climate change impacts, vulnerability and adaptation across Europe. CMCC has been coordinating the ETC since 2011 (and until 2026)

MYRIAD- EU Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the EU (H2020, 2021-2025). The project will co-develop the first harmonised framework for multi-hazard, multi-sector, systemic risk management. It provides a set of practical guidelines for carrying out a multi-risk assessment, formalised in guidance protocols. It will develop a web-based dashboard for navigating the framework, which gives access to state-of-the-art products and services of MYRIAD-EU and links to key resources from external projects.

affiliated Entities / Associated Partners

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Not applicable

| | |
|---|---------------------------------------|
| PARTICIPANT 8 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Città Metropolitana di Bologna (CMBO) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>The Metropolitan City of Bologna (CMBO) is an intermediate public authority with important responsibilities on policies for economic development, tourism, infrastructures, transport, environment and strategic planning at local level. The Metropolitan City of Bologna has an area of about 3,700 km² with 55 municipalities and over 1 million inhabitants. Bologna is the capital and largest city of the Emilia-Romagna Region and the 3rd Italian region by n. of firms that have invested in green technologies; it boasts some significant research centres on environment and climate change (e.g. ENEA, CNR, ECMWF data centre soon). It is Italy's 2nd most important location of innovative-tech start-ups, and the Italian city with the highest n. of invention patents in ratio to the n. of companies.</p> <p>Bologna is the main promoter of the <i>"Bologna Charter for the Environment"</i>, drawn up in Bologna in 2017, during the G7 meeting in the city. From waste to air and water quality, from energy transition to sustainable mobility, from biodiversity to circular economy, eight are the macro objectives identified by the Bologna Charter for Environment to be included in the metropolitan agenda for sustainable development, in line with the UN 2030 Agenda. Bologna has become the coordinator of this Pact, starting a process towards the local green transition. Between 2018 and 2019 the Metropolitan City of Bologna has developed, in collaboration with the Municipality of Bologna and the Alma Mater Studiorum - University of Bologna, the first <i>"Agenda for Sustainable Development"</i>. Its construction was based on a collaborative work shared between the various public and private subjects of the territory, and it is structured in eight chapters, reflecting the themes of the Bologna Charter. The Agenda was then updated and integrated, and in June 2021 the <i>"Agenda 2.0. The new dimensions of the Bologna Metropolitan Agenda for Sustainable Development"</i> was presented, an innovative instrument that, from the purely environmental dimension of the first version, extends the concept of Sustainable Development to the economic and social dimension, as desired by both the UN 2030 Agenda and the <i>"Metropolitan Strategic Plan"</i> (PSM 2.0), the main policy instrument of CMBO.</p> <p>In line with these policy strategies, the Economic Development Area of the Metropolitan City of Bologna runs some significant projects and activities in the Environment field, in order to implement the most relevant objectives of Green Transition and Sustainable Development, by leading and participating to European projects with the aim of transferring at the local level the most relevant best practices and learning deriving from the cooperation activities and collaborating with local, national and European partners in order to develop joint nature-based solutions to common problems. CMBO actually works on thirteen European projects in the field of Circular Economy, green start-up support, sustainable tourism and air-quality, financed by Interreg Europe, Central Europe, Adrion and Med, Horizon 2020, Life, Erasmus Plus, Urbact III.</p> <p>As a local public body, the Metropolitan City of Bologna acts a policy orientation role at local level and develops positive and strategic relations with the main local, regional and national Administrations, contributing in the policy development in the filed of economic, social and territorial development. For this reason, it will provide the partners consortium with its contribution in terms of policy management, actively contributing to the WP2 implementation, support in coordination of regional/local complementary funding, and, horizontally, supporting all the project consortium.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>Marino CAVALLO, male, Senior Project Manager, Head of Research innovation and European projects service</p> <p>Marino Cavallo has relevant experience in the economic sector and he developed many analyses and studies about the relations between social and economic issues and about the role of ICT technology and New Media in the cities and in the territories. He has been working for more than 20 years in Local and Territorial Authorities in Italy (Province of Bologna, Metropolitan City of Bologna). In this period, he achieved knowledge and experiences about public administration, innovation processes, projects to stimulate local and regional development. Moreover, he started successful activities for the management of European Projects and Programmes of interregional cooperation between the different countries of the EU. He is Head of the Department Research, Innovation and Management of EU Projects in the Metropolitan City of Bologna (Italy).</p> | |
| <p>Valeria STACCHINI, female, Senior Project Manager</p> <p>Since 2006 Mrs Stacchini has been based in the Office for Research, Innovation and European Project Management of the Metropolitan City of Bologna. Expert in territorial cooperation and sustainable urban planning, she takes part in</p> | |

the activities of research and innovation in Economic Development Area, contributing on circular economy, energy efficiency, urban agriculture, nature-based solutions. Mrs Stacchini has worked on more than 20 inter-regional co-operation projects funded by Interreg VIC, Interreg Europe, Interreg Med, Interreg Central Europe, Interreg Adrion, Urbact, IUC and Horizon2020. She is well experienced in project coordination, from a technical and organizational point of view; she has also experience in communication and event management work. She graduated in Architecture at the University of Ferrara in 2005 and obtained her international Masters - MAPAUSII the following year.

Elisa PIGHI, female, Junior Project Manager

Since 2013 she has been working in European projects, as project manager, partnership coordinator, projects designer and teacher/trainer. She has a long experience in the social field where she has managed European projects funded by the Leonardo-Toi and Erasmus+ programs, devoted to social inclusion and to the training for professionals of the sector. Since October 2021 she is based at the Economic Development Department - Research, innovation and European project management Service of the Metropolitan City of Bologna. Currently she is managing projects funded by Horizon2020, Life and Interreg Europe, focused on environmental issues, the promotion of sustainability, the fight to climate change and on the promotion of circular economy for SMEs. She is Ph.D in Sociology and graduated in Political Sciences at the University of Bologna.

Martina TRABALZINI, female, Junior Project Manager

She worked as a Data Analyst in ART-ER, Attractiveness Research Territory. Mrs Trabalzini was mainly responsible for the collection and processing of data from official statistical sources and databases of organizations dealing with the spread of the Internet in families, schools and companies in Italy and abroad, in terms of digital skills and STEM disciplines. She has worked for the production and representation of the data made available by the regional Coordination of the Digital Agenda of Emilia-Romagna for their presentation and dissemination to the main stakeholders. Since February 2022 she joined the Research, Innovation and European Project Management Service of the Metropolitan City of Bologna, where she works on different projects funded by INTERREG Europe, Life and Horizon 2020. She obtained a Master's degree in Statistics, Economics and Business curriculum Marketing and Market Research in 2019 at the University of Bologna.

Simona QUARTIERI, female, Junior Project Manager

She graduated in March 2018 in Local and Global Development of the University of Bologna. Since the university studies she developed interests and competences in European project management and she obtained in December 2020 a Master diploma in "Expert in projects financing and European funds". She started working in local Public Administrations in 2018, in the field of social services and integration, following the implementation and monitoring of services and projects financed by national and European funds (European regional development fund, European social fund, Erasmus+, Asylum migration and integration fund). Since October 2021 collaborates as EU project officer with the Research, Innovation and European Project Management Service of the Metropolitan City of Bologna, where she works on different projects on European interregional cooperation funded by INTERREG Europe and INTERREG Central Europe.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

VEG GAP – Vegetation for Urban Green Air Quality Plans

Programme: LIFE18-PRE

Duration: December 2018 - December 2021

Link: <https://www.lifeveggap.eu/>

Summary: The VEG-GAP project works on developing a strategy for providing new reliable information in support of designing urban Air Quality Plans (AQPs) considering the urban vegetation ecosystems characteristics such as plant type and state, green area extension, etc. The multiple vegetation ecosystems services will be evaluated in an integrated way through multi-scale and multi pollutant approaches resembling the real-world as much as possible. The vegetation ecosystems contributions both as a sources and sinks of air pollution, its effects on air temperature and further impact on air quality will be simultaneously investigated. This will contribute to a better understanding and evaluation of the possible risks and benefits for human health and ecosystems themselves associated with air pollution changes induced by vegetation/ecosystems changes which is another project objective. Bologna, Madrid and Milan are the cities where the work will be implemented. The main project aims are:

- to make available for the first time a framework of instruments (guidelines, support tools and information platform) that consistently consider the linkages between air pollution and vegetation

- characteristics in the development of effective control strategies
- to provide recommendations for improving the legislation aimed to maintain and improve air quality in European cities

CONNECTING NATURE - COproduction with Nature for City Transitioning, Innovation and Governance

Programme: Horizon 2020

Duration: June 2017 – May 2022

Link: <https://connectingnature.eu/>

Summary: Most innovation occurs in cities, but cities are also the location where most of today's major and urgent challenges occur; challenges such as rapid climate and environmental change, complex water and waste management, adverse health and well-being, changes in social cohesion and migration patterns. Nature-based solutions can provide an entry point to addressing these challenges. While the benefits of nature-based solutions are clear and can directly address the challenges outlined, the development and implementation of nature-based solutions has been slow, uneven and, in many cases complex; requiring efforts across many disciplines. Connecting Nature has taken these challenges on board and will devise and test approaches using multi-disciplinary methods where solutions are designed and created collaboratively that will lead towards the creation of resilient, greener, healthier cities, leading to a more sustainable living for their citizens. Connecting Nature is a five-years project funded by Horizon 2020 Innovation Action Programme. With 30 project partners from industry, local authorities, local communities, NGO's and research in 16 countries, and hubs in Brazil, China, Korea & The Caucasus (Georgia and Armenia). The main aim is to position Europe as a global leader in the innovation and implementation of nature-based solutions.

SinCE - Enhancing the Entrepreneurship of SMEs in Circular Economy of the Agri-Food Chain

Programme: INTERREG Europe

Duration: August 2018 – July 2023

Link: <https://www.interregeurope.eu/since-afc/>

Summary: Circular economy is a new approach of economic development models. Although the principles of circular economy are already applied by many large industries, SMEs, which represent the 99% of the businesses sector, still remain uninvolved due to lack of motivation and support. Thus, the regional SMEs policies improvement towards a more regenerative economy is of high importance. SinCE-AFC aims at involving SMEs of the Agri-Food chain in circular economy through the promotion of the appropriate managing and financial horizontal mechanisms. All the Agri-Food agents committed to production, processing, packaging, distribution and final consumption are expected to operate in a coordinated way to better adapt to circular economy. This objective will be achieved via the intense collaboration and interregional exchange of experience of 9 partners representing 7 Regions from 7 EU countries. The partnership's tasks will focus on the investigation of efficient practices, via interregional thematic learning events, study visits, import workshops, stakeholders' meetings and consultation processes, of how the relevant policy instruments can be improved in order to assist SMEs to enter circular economy. The core results will be depicted in a joint study reflecting the related regulatory framework and good practices at regional and EU level.

GRESS - GREen Startup Support

Programme: INTERREG Europe

Duration: August 2019 – January 2023

Link: <https://www.interregeurope.eu/gress/>

Summary: The need to promote a shift towards a low-carbon economy represents many business opportunities. The Small Business Act highlighted that the EU and Member States should enable SMEs to exploit these opportunities. There are many good practice examples that build the capacity of green and blue companies, but unfortunately, many of these examples are not replicated in other regions and remain unexploited. The objective of GRESS is to improve policies for SMEs' competitiveness by strengthening capacities to trigger and support formation of sustainable and competitive start-ups and spin-offs within the green economy. The policy improvements are envisaged to improve awareness on the opportunities for SMEs in green & blue economy, increase the no. of participants and improve the quality of training programmes for green start-ups, attract more SMEs to participate and succeed in public procurements of green products and services, improve access of SMEs to risk capital outside the local region, make cities and regions more attractive for young entrepreneurs in green sectors, introduce improved incentive

schemes for green start-ups, enhance the performance of ecosystems, increase the no. of competitive start-ups and spin-offs within the green economy and improve their chances of survival.

CESME – Circular Economy for SMEs and CESME+

Programme: INTERREG Europe

Duration: April 2016 – March 2020 / October 2021 – March 2023

Link: <https://www.interregeurope.eu/cesme/>

Summary: The CESME project addresses SME inclusion in the circular economy, by interregional meetings identifying good practices aiming to examine how best regional and local authorities and business development agencies can improve relevant policy instruments and design support packages to assist SMEs to enter the circular economy. Through the creation of a return on investment analysis - Circular Economy Toolkit quantifying the economic and social benefits of circular value chains as well as a White Book guiding SMEs step by step into circular economy, the CESME partnership hopes to introduce new circular initiatives targeted SMEs. These initiatives will be implemented and tested for feedback and adaptation in order to be replicable tools across EU as well as monitored against their expected impact. Finally, this will lead to the improved effectiveness of the policy instruments addressed by the project partners. CESME has been refunded in 2021, developing CESME+ project, a spin-off to evaluate the support policy instrument for enterprises during the Covid-19 Pandemic crisis.

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Insert text

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| PARTICIPANT 9 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ERSAF is an instrumental body of the Lombardy Region, established in 2002, with the aim of carrying out activities mainly in the following sectors: development of strategic agricultural and agri-food chains; enhancement of Lombard agri-food products; protection of forest and agroforestry heritage, management of the Stelvio National Park - Lombard sector, management of state-owned assets, nature reserves and Natura 2000 sites; promotion of the multifunctional use of the rural territory and environmental requalification; enhancement of non-food agroforestry production and biodiversity.</p> <p>ERSAF is the technical partner of the River Contracts in Lombardy and has experience in ecological connection projects along waterways. On the basis of these experiences, ERSAF coordinates task 6.3 which focuses on the sub-basin of the Northern Lambro River Contract. Furthermore, has experience in soils classification and characterisation, soil monitoring both from an environmental point of view and from different management technique. ERSAF organizes and carries out demonstration days in the field and knowledge transfer actions as well as activities to involve stakeholders.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>LUCIA RATTI, F, Manager, Architect</p> <p>In ERSAF since 2009. Areas of activity: support for the coordination of LIFE projects, such as LIFE+ Wolfalps, WolfAlps EU and IP GESTIRE 2020, support to the Lombardy Regional Council in the field of conservation of fauna and fauna management.</p> | |
| <p>DARIO KIAN, M, Project Manager, Environmental Engineer</p> <p>In ERSAF since 2011, deals with territorial projects and planning tools. Since 2012 coordinates the Team established to support the processes of River Contracts in Lombardy. Since 2022 has been the scientific technical manager of the LIFE IP GESTIRE 2020 project.</p> | |
| <p>STEFANO BRENNI, M, Manager, Agronomist and Pedologist</p> <p>In ERSAF since 2002, deals with European, National and Regional projects on soil monitoring, characterization and management.</p> | |
| <p>UTA BIINO, F, Project Manager, Agronomist</p> <p>In ERSAF since 2019, deals with innovative agricultural supply chain and stakeholder engagement.</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>RIVER CONTRACT – Strategic river basin planning aim to river restoration and to manage climate change</p> <p>IP GESTIRE2020 (LIFE14 IPE/IT/000018) - Nature Integrated Management to 2020 - Ruolo nel progetto: Partner</p> <p>HELPSOIL (LIFE12 ENV/IT/578) - Helping enhanced soil functions and adaptation to climate change by sustainable conservation agriculture techniques - Ruolo nel progetto: Partner</p> <p>GESTIRE (LIFE11 NAT/IT/044) - Sviluppo di una strategia per gestire la Rete Natura 2000 in Lombardia - Ruolo nel progetto: Partner</p> <p>MAKING GOOD NATURA (LIFE11 ENV/IT/000168) – Making public Goods provision the core business of Natura</p> | |

2000 - Ruolo nel progetto: Partner

CRAINat (LIFE08 NAT/IT/352) – Conservation and recovery of Austroptamobius pallipes in Italian Natura2000 sites -
Ruolo nel progetto: Partner

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| Participant 10 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Legambiente Nazionale APS Onlus (LEGAMB) |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Legambiente is the most widespread environmental association in Italy and it is recognized as “association of environmental interest” by the Italian Ministry for the Environment. It includes more than 1.000 local groups and 20 regional committees, over 115.000 members and supporters. The main aim of Legambiente is to safeguard biodiversity, protect natural areas, promote an efficient use of natural resources and foster sustainable territorial development. It has been also working against environmental illegalities, promoting solidarity and peace as fundamental values of our society. Legambiente carries out national awareness and information campaigns which involve other associations, public administrations, educational institutes and students, companies and citizenship in general. Legambiente acts at local, national and EU levels to lobby for sustainable development, green economy, and climate change mitigation and adaptation. Since 2000, Legambiente has been carrying out several projects financed by the LIFE program. Our key mission is:</p> <ul style="list-style-type: none"> • Scientific environmentalism to build policies and to advocate change towards local, national and international stakeholders and institutions • To engage communities, stakeholders and people and enable them be the leading actors of change • To drive the economy towards new models of green and circular economy • To improve the quality of life for everyone (environmentally and socially). | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| [Di Marco] [Stefano], [Male], [Projects Dept. Coordinator], [Geologist] | |
| Degree in geology has over 30 years of professional experience in the field of environment, nature, wildlife, ecotourism and cultural heritage. Expert of project design and project management he manages the Projects Dept. of Legambiente. Expert of communication, advocacy, fund raising and EU Programs, since 1990 he managed many European projects including several LIFE projects concerning the conservation of species and habitats, Natura 2000 sites, climate changes and other topics. | |
| [Minutolo] [Andrea], [Male], [Head of Scientific Dept], [Geologist] | |
| Degree in Geologist with about 20 years of experience in the field of environment with a focus on air, soil, and water quality. Head of Scientific Department of Legambiente, he managed several European projects (mainly Horizon and Life). | |
| [Amato] [Sibilla], [Female], [Project Manager], [Architect] | |
| Degree in Architecture. Expert of climate change and energy issues has gained a good experience in the management of international projects. | |
| [Biondo] [Cristiana], [Female], [Project Manager], [Environmental Engineer] | |
| Degree in Engineering with a focus on environmental issue. Expert of climate change with a good experience in the management of international projects. | |
| [Dominici] [Milena], [Female], [Head of Communication], [Journalist] | |
| Journalist, expert in media relations. head of the communication office of the Legambiente projects department; she has several journalistic experiences (mostly in press offices, but also in Rai and Mediaset television editions and paper prints). She has over 20 years of experience in environmental projects' communication. She managed communication PROJECT Project name and acronym: Climate Adaptation for the Po River basin district-LIFE CLIMAXPO activities in several Life projects. | |
| [Piazzini] [Alessandro], [Male], [Senior Expert in biodiversity], [Biologist] | |
| Graduated in Biology at the University of Rome "Sapienza", MSc in "Ecological Network and Protected Areas management". Expert on biodiversity and wildlife-based and protected areas. Project management (technical and financial aspects) with experience as project manager or technical coordinator or assistant to project manager in LIFE | |

projects. More than 15 years of experience of Management Plan or Conservation measures of Natura 2000 sites. Expert in innovative actions such as ecosystem services, payments for ecosystem services.

Projects or Activities

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

- LIFE CLIMACTION-In azione per contrastare l'emergenza climatica e favorire la transizione energetica LIFE20 NGO4GD/IT/000014
- LIFE AGREENET–LIFE 20 CCA/IT/001752•
- LIFETERRA–Europe's single biggest citizen-driven initiative to plant and monitor 500 million trees to mitigate climate change LIFE19 CCM/NL/001200
- LIFESTONEWALLS4LIFE –Using dry stonewalls as a multipurpose climate change adaptation tool - LIFE 18CCA/IT/00145
- LIFE BLUE LAKES - LIFE18/GIE/IT/000813
- LIFE STREAMS -Salmo cettii recovery actions in mediterranean streams - LIFE18 NAT/IT/000931

affiliated Entities / Associated Partners

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

For the implementation of the activities in the intervention areas (Piedmont, Lombardy, Veneto, Emilia Romagna) Legambiente Nazionale will be supported at local level by its regional offices which are legally and economically distinct entities. Legambiente Piemonte

1. Legambiente Lombardia
2. Legambiente Veneto
3. Legambiente Emilia Romagna
4. Legambiente Piemonte Val d'Aosta

Legambiente Nazionale, which operates on a national level, will be act as a beneficiary while the other ones, which operate at regional level, will act as affiliate entities. Legambiente Nazionale, that has a great experience in managing LIFE and non-LIFE project dealing with environmental topics, will be leader of the WP10. The affiliated entities will support Legambiente Nazionale mainly in the task T10.2 Multitarget awareness campaign that foresees the implementation of numerous activities aimed at some key stakeholders at local level.

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| Participant 11 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Legambiente Lombardia Onlus |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Legambiente Lombardia is a non-profit organization whereby a group of individuals, joined together to improve and protect the environment. Legambiente Lombardia performs its activities on a regional basis, with more than 80 local groups. It promotes initiatives against soil consumption and for the conservation of natural resources. The members are involved in activities such as raising awareness, information, education, scientific issues.</p> <p>Its environmental campaigns, such as Clean up the world, People4soil and Lake Schooner are well known and involve thousands of volunteers.</p> <p>In particular Legambiente Lombardia developed several projects dealing with biodiversity protection and conservation in all the region. Since the beginning of the 2000s the association has started working onland conservation and management with a “land stewardship” approach.</p> <p>It has developed activities and initiatives to promote and valorise the local biodiversity with citizens’ involvement. At regional level the association has being developing several projects on ecological networks and biodiversity conservation and climate change, focusing on dissemination activities and citizens’ involvement.</p> | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>Lorenzo Baio, male, senior project management, naturalist, expert in water management, coordinator of several projects in ecological connections.</p> <p>Andre Causo, male, senior, administrative management, expert in financial management in EU project</p> <p>Simona Colombo, female, senior project manager, coordinator in several EU project in land planning, biodiversity conservation.</p> | |
| Projects or Activities | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>LIFEMETROADAPT, enhancing climate change adaptation strategies and measures in the Metropolitan City of MilanLIFE17 CCA/IT/000080</p> <p>LIFEORCHIDS, improving the conservation status of critically endangered orchid communities in selected habitats in North-western Italy -LIFE17 NAT/IT/000596</p> <p>Improving guidance and knowledge sharing between land managers, conservationists and local communities to preserve cultural heritage landscapes under and outside Natura 2000 -Call for Tenders ENV/2020/OP/0043 #CambiamoAgricoltura: dal piano strategico nazionale della PAC post 2022 alla strategia EU "Forma to fork" -fase 4 (2021-4346 Fondazione Cariplo)</p> <p>Landlife Boosting Land Stewardship as a Conservation Tool in the Western Mediterranean Arch: a Communication and Training Scheme -(LIFE+ 10INF/ES/540)</p> | |
| affiliated Entities / Associated Partners | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
| <p>In the implementation of the project will be involved Legambiente Nazionale APS together with regional offices Legambiente Veneto, Legambiente Piemonte Legambiente Lombardia and Legambiente Emilia Romagna. The first, which operates on a national level, will be act as a beneficiary while the other ones, which operate at regional level, will act as affiliate entities. The organizations are legally and economically distinct each other. Legambiente Nazionale, that has a great experience in managing LIFE and non-LIFE project dealing with environmental topics, will be leader of the WP10. Legambiente Lombardia will support Legambiente Nazionale mainly in the task T10. Multitarget awareness campaign that foresees the implementation of numerous activities aimed at some key stakeholders at local level.</p> | |

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| Participant 12 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | LEGAMBIENTE VENETO APS |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| Legambiente Veneto APS is a second-level voluntary association that groups, coordinates, helps and represents Legambiente's sections on the regional territory of Veneto. Legambiente Veneto has the purpose of foster a society based on a balanced relationship between man and nature, for a development model based on the appropriate use of natural and human resources and for the of the environment. | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| [Luigi] [Lazzaro], [Male], [local project manager], [association president] | |
| He has gained experience in the management and coordination of international and local projects in the field of volunteering, green and circular economy, waste management. He also run the development of Legambiente's communication campaigns | |
| [Piero] [Decandia], [Male], [Senior Financial Officer], [association director] | |
| He has gained experience on the financial management of local, regional, and national project. He also has knowledge about renewable energy policies and skills in the develop of community engagement | |
| [Melissa] [Morandin], [Female], [Junior Financial Officer], [administrative employee] | |
| She has Political Science degree and she's gained experience in the no profit organization management. She also attends a specialization course of European project and planning at Padua University. In this organization she run on the fundraising office. | |
| Projects or Activities | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <ul style="list-style-type: none"> • LIFE CLIMACTION -In azione per contrastare l'emergenza climatica e favorire la transizione energetica–LIFE20 NGO4GD/IT/000014 • CAPSUS –The common Agricultural Policy Toward Sustainability–IMCAP programme of the EU • LIFE TERRA-LIFE 19 CCM/NL/001200 -climate action initiatives • INVOLVE-AMIF2017AGINTE_821666–INtegrationofmigrantsasVOLunteersforthesafeguardofVulnerableEnvironments • CAPTOR –collective awareness platform for tropospheric ozone pollution -Horizon 2020 • MARKET WATCH -IEE/12/858/SI2.6447 61 –ecodesign and energy label | |
| affiliated Entities / Associated Partners | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
| In the implementation of the project will be involved Legambiente Nazionale APS together with regional offices Legambiente Veneto, Legambiente Piemonte, Legambiente Lombardia and Legambiente Emilia Romagna. The first, which operates on a national level, will be act as a beneficiary while the other ones, which operate at regional level, will act as affiliate entities. The organizations are legally and economically distinct each other. Legambiente Nazionale, that has a great experience in managing LIFE and non-LIFE project dealing with environmental topics, will be leader of the WP10. | |
| Legambiente Veneto APSwill support Legambiente Nazionale mainly in the task T10.2 Multitarget awareness campaign that foresees the implementation of numerous activities aimed at some key stakeholders at local level | |

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| Participant 13 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | LEGAMBIENTE PIEMONTE E VALLE D'AOSTA APS |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Legambiente is a national NGO with several regional branches on the national territory. Legambiente Piemonte e Valle d'Aosta (LPVDA) is one of them and coordinates 31 local clubs in the two regions, 30 in Piemonte and 1 in VDA. LPVDA has a young staff, 3 permanent employees (one full time and two part time) and 3 part time collaborators. The organisation's management team, known as the President's Council, is made up of 9 volunteers elected by the members of the local clubs. The LPVDA's mission is to protect the environment and address many local issues through campaigns, complaints and scientific reports. The complaints and all the information collected by Legambiente, come from a pull of experts and citizens through "scientific environmentalism". Activities involve volunteers, schools, NGO staff, administrations and other local authorities. LPVDA has long started projects involving local and regional administrations, Park Authorities, Universities with the aim of spreading environmental awareness on specific issues of the territory. Rivers, lakes, the Alps, large parks, hilly areas, the plains: a vast and complex territory to preserve and protect. LPVDA has completed the LIFE VisPO project in sept. 2021, a protection project for the Po river and its tributaries in Piedmont.</p> | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| [Alice] [De Marco], [Female], [Staff Manager], [Local Director] | |
| <p>Director of LPVDA, head of staff and the association's main interlocutor with institutional actors in the area. She was part of the working team of the Life ESC VisPO project of which LPVDA was leader as public relations advisor and communication officer.</p> | |
| [Sergio] [Capelli], [Male], [Communication Manager], [Communication Expert] | |
| <p>He is a consultant, responsible for environmental communication sector. At LPVDA he is Press Officer, Webmaster and Social Media Manager. Administrator for LPVDA, he was part of the working team of the Life ESC VisPO project led by LPVDA as office manager and quality assurance supervisor.</p> | |
| [Valentina] [Chiabrando], [Female], [Local Project Manager], [Environmental Economist] | |
| <p>Project manager for LPVDA, she is currently working on several active projects of LPVDA. She was part of the working team of the Life ESC VisPO project of which LPVDA was leader as administrative and coordinator of volunteering activities.</p> | |
| [Federica] [Sisti], [Female], [Staff member], [Biologist] | |
| <p>Responsible for the training sector for LPVDA as well as responsible for information and engagement campaigns for LPVDA. She was part of the working team of the Life ESC VisPO project led by LPVDA as administrative and account manager.</p> | |
| Projects or Activities | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>LIFE CLIMACTION -In azione per contrastare l'emergenza climatica e favorire la transizione energetica–LIFE20 NGO4GD/IT/000014</p> <p>LIFE VisPO –Volunteering Initiative for a sustainable PO. LIFE17 ESC/IT/000002</p> <p>LIFE TERRA-Europe's single biggest citizen-driven initiative to plant and monitor 500 million trees to mitigate climate change LIFE19/CCM/NL/00120</p> | |
| affiliated Entities / Associated Partners | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
| <p>In the implementation of the project will be involved Legambiente Nazionale APS together with regional offices Legambiente Veneto, Legambiente Piemonte e Valle d'Aosta, Legambiente Lombardia and Legambiente Emilia</p> | |

Romagna. The first, which operates on a national level, will be act as a beneficiary while the other ones, which operate at regional level, will act as affiliate entities. The organizations are legally and economically distinct each other. Legambiente Nazionale, that has a great experience in managing LIFE and non-LIFE project dealing with enviromental topics, will be leader of the WP10.

Legambiente Piemonte e Valle d'Aosta will support Legambiente Nazionale mainly in the task T10.2 Multitarget awareness campaign that foresees the implementation of numerous activities aimed at some key stakeholders at local level

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| Participant 14 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Legambiente Emilia-Romagna AP |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Legambiente Emilia-Romagna APS is one of the 20 Regional branches of Legambiente Nazionale APS Onlus which is the most widespread environmental organization in Italy.</p> <p>It promotes and carries out local-based research and analysis activities concerning specific ecological, environmental, territorial and socio-economic problems; produces, distributes, disseminates scientific, technical, cultural, didactic material, through any means of dissemination; carries out environmental education activities for the school and many local initiatives to protect environmental resources, the territory and the landscape with the involvement and mobilization not only of its members but also of thousands of citizens; stipulates agreements with public and private entities, and participates in tenders, public tenders, competitions for the sharing of research experiences, training and information on issues related to the protection of the landscape, natural resources and the territory.</p> <p>Legambiente Emilia-Romagna APS carries out region-based informative and monitoring campaigns to protect the environment, namely: Clean up the World, the local environmental action to involve citizens in waste collecting; Goletta Verde (Green Schooner), the analysis campaign about Italian seas pollution; Treno Verde/Clean Cities monitoring cities' performances on air and noise pollution and sustainable mobility approach; Festa dell'Albero, involving schools and citizens in urban forestry initiatives to tackle climate change effects; Fishing for Litter, involving fishing operators and sea communities in initiatives of collecting and reducing marine litter.</p> <p>Since 2014 it has been carrying out several projects financed by the LIFE program</p> | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| [Lidia] [Castagnoli], [Female], [Project and Financial Senior Manager] | |
| <p>Degree in Italian Literature, Post-Lauream Master degree as Fashion and Textile Industry Product Manager. Her key qualifications are International Projects Management, Public and Institutional Relations, Media and Communications strategies. Since 1998 she has been Short Term Expert, Consultant and Project Manager of several projects run in the framework of European programs of economic cooperation, European Territorial Cooperation, environment protection and climate actions. In Legambiente Emilia-Romagna she is in charge of the management and financial monitoring of the European, National and Regional projects</p> | |
| [Paola] [Fagioli], [Female], [Local Animation Junior Expert], [Biologist] | |
| <p>Degree in Biological Sciences, she has been working since 2006 in Legambiente on Sustainable Tourism and the enhancement of the territory, dealing with the management of certification procedures for accommodation and tourist facilities. In Legambiente Emilia-Romagna she is in charge of awareness and local animation activities, and local committees coordination.</p> | |
| [Davide] [Ferraresi], [Male], [Junior Scientific expert], [Physicist] | |
| <p>Degree in Physics, he took part in the design and implementation of educational, training and dissemination activities in the "Green Sustainability & Science" sector, and air quality monitoring activities in the framework of Legambiente Emilia-Romagna educational courses. In Legambiente Emilia-Romagna he deals with scientific contents related to environment impacts of industrial activities and ecosystems preservation.</p> | |
| Projects or Activities | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <ul style="list-style-type: none"> • LIFEGREEN4BLUE-GREENing the BLUE canals infrastructure of Reno basin to enhance ecosystems connectivity and services(LIFE18 NAT / IT / 000946) which aims at the environmental requalification of 60 km of reclamation canals to enhance the role of green and blue infrastructures in connection of the natural areas of the territory (Natura 2000 Network), through innovative management that integrates hydraulic safety, support for local biodiversity, fight against invasive alien species and protection of the landscape; • SOS4Life–Save Our Soil for Life (LIFE15 ENV / IT / 000225) which aims to fight and monitor at the municipal | |

level land consumption and soil sealing, resulting in the loss of essential ecosystem services;

- PhotoCityTex-Air pollution treatment in European urban environments by means of photocatalytic textiles (LIFE13 ENV/ES/000603).

affiliated Entities / Associated Partners

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

In the implementation of the project will be involved Legambiente Nazionale APS together with regional offices Legambiente Veneto, Legambiente Piemonte, Legambiente Lombardia and Legambiente Emilia Romagna. The first, which operates on a national level, will be act as a beneficiary while the other ones, which operate at regional level, will act as affiliate entities. The organizations are legally and economically distinct each other. Legambiente Nazionale, that has a great experience in managing LIFE and non-LIFE project dealing with environmental topics, will be leader of the WP10. Legambiente Emilia-Romagna APS will support Legambiente Nazionale mainly in the task T10.2 Multitarget awareness campaign that foresees the implementation of numerous activities aimed at some key stakeholders at local level

PARTICIPANT 15 (use same partner numbering as on Submission System screens).**Legal name (short name):**

Politecnico di Torino (POLITO)

DESCRIPTION OF PARTICIPANT

Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.

The **Politecnico di Torino** (www.polito.it), founded in 1906 from the roots of the Technical School for Engineers created in 1859, has a long-standing tradition of leadership of polytechnic culture. It is one of the most important universities in Europe for **engineering and architecture studies**, strongly committed to collaboration with industry. Currently it is among the top Engineering and Technology universities in the world, the 39th according to the **QS University Rankings 2021** by broad Subject, the 34th in Architecture and Built Environment, 33th for Civil and Structural Engineering and 30st in Mechanical, Aeronautical and Manufacturing by Subject.

It has an yearly budget of about €300 million and over **36,000 students** enrolled in academic courses of different levels, Bachelor, Master of Science, PhD, Specializing Master Courses of I and II Levels (16% of them are international students). POLITO international education network features about **463 bilateral agreements** and **120 double-degree agreements** with EU and non-EU universities, active participation in university networks and the establishment of international campuses (e.g. Sino-Italian campus of Tongji University in Shanghai). Moreover, it is part of some of the major European **interuniversity networks**, such as CESAER, CLUSTER, EUA, T.I.M.E, SEFI, ISCN and Magalhaes. These contacts allow spreading and disseminating project results to a wide number of institutions. POLITO employs **961 people** among professors and tenured researchers. Each year POLITO draw up about **800 contracts** with industries, government funded institutions, local organizations. The participation to many national and international projects allows POLITO to accrue a great experience: it has about **552 international and national funded projects**, among which in **H2020** it has **265 approved** projects with a total EU contribution of **103 million Euro**. It has also a strong experience in project coordination: the **Research Support Department** has been involved in the management of EU RTD projects since 1995. Politecnico di Torino is also active in many activities and projects aiming at citizens' involvement in science. POLITO is interested in developing permanent partnerships in research and education with industries that want to take advantage of university collaboration for innovation and development. The **Cittadella Politecnica** (the 170,000 m² expansion of the main campus in a central position of Torino city) is the place dedicated to cooperation between POLITO and industries.

The Department of ENVIRONMENT, LAND AND INFRASTRUCTURE ENGINEERING (DIATI) is the point of reference in Politecnico di Torino for the areas of knowledge that study the technologies which deal with safeguarding, protecting and managing the environment and land, the sustainable use of resources, as well as the optimal and eco-compatible development of infrastructures and transport systems. DIATI promotes, coordinates and manages basic and applied research, training, technology transfer and services to the local community in the field of engineering applications within land sciences, natural sciences and economic and management sciences.

Our area focuses on water-related risks and on water resources for humans and environment. We perform theoretical and applied research about extreme events, infrastructures, field measurements, data analysis, physical and statistical modelling. Our goal is to advance scientific knowledge and develop engineering applications for a sustainable, safe and efficient future.

Research outcomes are published in **scientific papers** in high-ranking journals and we had a number of funded projects at national and European level (e.g. **CWASI**, **RESBA**, PITER, ViWAN).

We have national and international collaborations with public authorities, other Universities, and small to large enterprises.

The main research topics are the following (in parenthesis, people mostly involved):

Statistical hydrology (Viglione, Claps, Ganora): models for hydrological extremes, time series analysis, hydrological prediction in ungauged basins, uncertainty analysis, cost-benefit analysis in hydrologic design

Prevention and control of hydro-geological risk (Viglione, Claps, Ganora): large-scale flood and rainstorms hazard mapping, management of hydrological dam safety, risk awareness in population

Climate change effects on floods (Viglione, Claps, Ganora, Battaglia): statistical methods for trend analysis of extreme rainfall and floods over large areas, long-term hydrological modelling and attribution of trend effects in snow-affected basins, evaluation of climate model rainfall sensitivity

Web-based solutions for hydrologic analysis (Claps, Ganora): server-client implementation of hydrologic mapping of rainfall extremes, web-based procedures for design rainfall and flood estimation

Water resources assessment (Viglione, Claps, Ganora): large scale statistical modelling of surface water availability, evaluation of man-induced effects on water resources, large-scale assessment of residual hydropower resources

Remote sensing and satellite monitoring (Tamea, Claps, Battaglia): the Copernicus system services and the NASA-Global Precipitation Measuring mission products for local and global hydrological modelling,

Water for irrigation and food production (Tamea, Laio, Claps): water footprint assessment of agricultural goods, modelling of crop evapotranspiration and irrigation requirements, climate change effects on water resources for agriculture, irrigation volumes assessment through satellite data, environmental cost of water withdrawals.

KEY STAFF

Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.

Pierluigi CLAPS, M, Full Professor

Pierluigi Claps is Full Professor of Water Engineering since 2000 and his expertise focuses on hydrological extremes (floods and droughts) and on the water resources assessment at regional scale, including the effects of climate change on hydrologic variables. His research score include 42 papers on international journals (H-Index. 24). He has been project coordinator for National and Interreg projects in the last 15 years and he has been President of the Italian Group of Water Engineering (GII) from 2012 to 2016.

Roberto Revelli, M, Full Professor

Roberto Revelli is Full Professor of Water Engineering and Marie Skłodowska-Curie Fellow. His expertise includes fluid mechanics and transport processes, flows, transport and nutrient dynamics in hyporheic zones, historical hydraulics, wetlands and urban drainage, ecohydrology and ecosystem services. He has been awarded the Marie S-Curie grant for the project “ECO.G.U.S.” in 2018. He has a long teaching experience and recently led the courses of Hydraulics, Environmental Hydraulics and River Hydraulics at the Politecnico di Torino.

Carlo Camporeale, M, Full Professor

Carlo Camporeale has recently been appointed Full Professor at the Politecnico di Torino. He holds two Master's degrees in Environmental Engineering and in Physics of Complex Systems, plus a PhD in Hydraulic Engineering. He is author of more than 70 publications on ISI peer-reviewed international journals (H-index=19) and his scientific activity mainly concerns fluid mechanics, river mechanics, morphological instability and biomorphodynamics. He is member of the Group of Environmental Fluid Mechanics.

Luca Ridolfi, M, Full Professor

Luca Ridolfi is full professor in Hydraulics and Fluid Mechanics. He has been Head of Department, coordinator of the Doctoral program in Water Engineering, in Environmental Engineering, and in Civil and Environmental Engineering. He has authored more than 220 papers in ISI peer-reviewed journals and received >8800 (H-index=49). His expertise spans from Fluid Mechanics (wall turbulence, canopy turbulence, heterogeneous porous media, open channel flows, sediment transport), Stochastic processes, Eco-hydrology (coupling between water cycle and plant biosphere, water stress, plant water uptake, impact of climate change on plant ecosystems) and quantitative geomorphology (meandering river geomorphology, impact of damming in river geomorphology, river morphodynamics).

Fulvio Boano, M, Associate Professor

Fulvio Boano, PhD in Hydraulic Engineering. He is associate professor in Hydraulics and teaches Urban Water Drainage, Fluid Mechanics, and Design for Climate Resilience. His main research interests include the study of water flow and solute transport in porous media and how natural processes can be harnessed to improve water quality and reduce anthropic impact on the environment (>50 peer-reviewed papers on international scientific journals with >2000 citations; H-index=23).

Stefania Tamea, F, Associate Professor

Stefania Tamea is Associate Professor in Hydrology. She holds a PhD degree from the Politecnico di Torino in Water Engineering and her work focuses on water resources for agriculture and food production, on virtual water and water footprint assessment, on field monitoring and remote sensing of water availability, including glaciers, in current times and under climate change. She has co-authored 27 papers in international ISI journals and 5 book chapters.

Daniele Ganora, M, Associate Professor

Daniele Ganora has been recently appointed Associate Professor in Hydrology. He holds a degree *magna cum laude* in civil engineering (2007) and a PhD in Water Engineering (2010), he has been post-doc associate and assistant professor at the Politecnico di Torino, and scientific officer at the Joint Research Center of the European Commission. He has expertise in the research areas of hydrological extreme modeling, urban water drainage, conventional and unconventional water resources.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

- **CWASI - Coping with water scarcity in a globalised world, ERC Consolidator grant project, 2015**
- **GrayMarble - Conservation and management of marble trout and Adriatic grayling in the Dora Baltea catchment, LIFE 2019**
- **RESBA – Resilienza degli sbarramenti, INTERREG ALCOTRA 2014-2020**
- **PITER ALPIMED CLIMA, INTERREG ALCOTRA 2014-2020**
- **PITER ALPIMED INNOV, INTERREG ALCOTRA 2014-2020**

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

No work will be performed by other entities or partners.

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| PARTICIPANT 16 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Società Metropolitana Acque Torino S.p.A. (SMAT) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>SMAT is the water utility managing the Integrated Urban Water Management (IUWM) in the whole Metropolitan City of Turin for more than 2.2 million inhabitants from almost 300 municipalities. These include Turin urban area, which accounts for about half of the total population served. SMAT Group is a leader in the field of integrated water services and operates in the areas of water networks and infrastructures, engineering, construction and management of diversified water sources, state-of-the-art drinking water treatment systems, sanitation systems and recycling of urban wastewater, collection, purification and recycling networks, energy cogeneration and recovery systems. Since 2008, SMAT has strongly engaged in research activities, with the inauguration of the Research Centre counting 7 full-time researchers and about 50 operators with a variety of competences including engineering, chemistry, physics, biology and biotechnology and has a fully equipped laboratory. Currently, SMAT Research Centre is involved in about 20 projects (two EU-funded Horizon 2020 projects).</p> <p>Being responsible of main critical network infrastructures (about 12.500 km of water distribution network and 13.000 km of waste water distribution network in the whole metropolitan area of Turin) and aware of the vulnerability of densely populated areas to extreme precipitation events, SMAT already implemented for the Turin urban area: (1) the model of the water distribution system, that is fully integrated into SMAT SCADA and provides to the company a useful forecasting tool and (2) a urban drainage system modelling (covering a section of the urban drainage network of the City of Turin, representing approximately 50% of the whole network) in order to understand the behaviour of the network in presence of hydrological events of increasing intensity.</p> <p>Within LIFE CLIMAX PO, SMAT will improve the climate resilience of its urban drainage network, disposing of effective risk assessment management tools and plans. Moreover, SMAT will provide its know-how for the definition of multilevel governance strategies of the project.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Elisa] [BRUSSOLO], [Female], [Researcher], [Environmental Physicist, PhD]</p> <p>Research projects coordination. Expert on the impacts of climate change on water resources; stochastic downscaling techniques and application on rainfall field; evaluation of weather models uncertainty for hydro-meteorological prediction chain.</p> | |
| <p>[Marco] [SCIBETTA], [Male], [Researcher], [Hydraulic Engineer, PhD]</p> <p>Research projects coordination. Expert on modelling and optimization of Water Distribution Systems; water loss reduction; vulnerability and reliability analysis of Urban Drainage Networks.</p> | |
| <p>[Armando] [QUAZZO], [Male], [Research, Innovation and Development Executive, Merger and Acquisition Responsible], [Law Degree]</p> <p>Organization of applied research activities in the field of integrated water service. Management of international development activities. Management and coordination of national and international calls for innovation and development projects. Management of relations with local authorities and water authorities.</p> | |
| <p>[Garcea] [DOMENICO], [Male], [Technical/Administrative Assistant], [Economics and Business Degree]</p> <p>Expert in reporting and accounting of European projects.</p> | |
| <p>[Silvano] [IRALDO], [Male], [Technical Director], [Chemical Engineer]</p> <p>Coordination of SMAT's Engineering, Water, Sewerage and Sanitation Functions. Competence in relation to the main technical aspects concerning the design, assignment, execution, testing of works and management of network infrastructures.</p> | |
| <p>[Chiara] [MANAVELLO], [Female], [North-East District Manager], [Surveyor Diploma, technical manager]</p> <p>Coordination of the conduction and maintenance services of networks and plants for the integrated water service of the north-east district of SMAT's managed area (that is the location area of the rainfall monitoring network used for the project)</p> | |
| <p>[Andrea] [QUARTANA], [Male], [Operational Unit Responsible], [Civil Engineer]</p> | |

Management and monitoring of production plants, water-drinking distribution networks, lifting plants of the water and networks and of the wastewater treatment plants of the location area of the rainfall monitoring network used for the project.

[Michele] [GORACCI], [Male], [Head of ITC], [Telecommunications Engineering Degree]

Responsible of SMAT's ITC systems.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

1. Model of Turin water distribution system

The project was developed through a collaboration with the Polytechnic of Turin. In the preliminary phase, data already available in the SMAT archives, information derived from network operators daily experience and data coming from a vast campaign of measurements were collected in order to achieve an excellent level of knowledge of the network to be modelled. After the calibration, the model was finally integrated into SMAT SCADA, thus providing to the company a useful forecasting tool.

2. Turin urban drainage system modelling

The project, carried out in collaboration with the Polytechnic of Turin and currently underway, aims at creating the hydraulic model of a section of the urban drainage network of the City of Turin, representing approximately 50% of the whole network. The behaviour of the network will be modelled in presence of hydrological events of increasing intensity and, on this basis, it will be evaluated the risk level in the different areas and in changing hydrological conditions.

3. MoMoSS

The project, carried out in collaboration with the Polytechnic of Turin and currently underway, aims to analyse and improve the management of the inter-municipal collector system that conveys wastewater to the Castiglione Torinese wastewater treatment plant. The system of collectors, composed of three main collectors (North, West and South), in addition to the median channel that runs within the City of Turin, allows the transport of wastewater produced by users distributed in 48 municipalities to the purification plant of Castiglione Torinese in a safe and controlled way. It is intended to improve its management through an approach that allows to know in real time the status of all the physical variables involved in order to guide the choices of the operational management in a well-informed way.

4. DERRIS

DERRIS was a European project that involved the public administration and small and medium enterprises (SMEs) to reduce the risks deriving from extreme weather events. The pilot phase of the DERRIS project took place in the City of Turin from April 2016 to April 2017. A climatic risk self-assessment tool (CRAM tool) was developed for businesses. SMAT supported the City of Turin during the participatory planning of the project and tested the CRAM tool for writing the adaptation plan of one of SM.

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| Participant 17 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | EMILIA ROMAGNA REGION – GENERAL DIRECTORATE RESOURCES, EUROPE, INNOVATION AND INSTITUTIONS; GENERAL DIRECTORATE CURA DEL TERRITORIO E DELL'AMBIENTE; GENERAL DIRECTORATE AGRICOLTURA, CACCIA E PESCA, AGENZIA REGIONALE PER LA SICUREZZA TERRITORIALE E LA PROTEZIONE CIVILE |
| Description of participant | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| Technical expert for Emilia-Romagna Region on WP 9, in particular task 9.3 “Monitoring and evaluating the results directly linked to CLIMAX PO objectives in ref. to the National Strategy for Adaptation to Climate Change (SNACC)” | |
| Key staff | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Luana] [BASTONI], [F], [expert], [Project implementation WP9] Expert Dept. EUROPEAN POLICY COORDINATION, PLANNING, INSTITUTIONAL REFORM AND TERRITORIAL DEVELOPMENT, PARTICIPATION, COOPERATION AND EVALUATION UNIT</p> <p>[Patrizia] [BIANCONI], [F], [Senior expert], [Coordination WP9] Project management; Senior expert Dept. VALUTAZIONE IMPATTO E PROMOZIONE SOSTENIBILITÀ AMBIENTALE</p> <p>[Caterina] [BRANCALEONI], [F], [Dir], [Coordination WP9] Project management; Responsible Dept. EUROPEAN POLICY COORDINATION, PLANNING, INSTITUTIONAL REFORM AND TERRITORIAL DEVELOPMENT, PARTICIPATION, COOPERATION AND EVALUATION UNIT</p> <p>[Marco] [DESERTI], [M], [Dir], [Coordination WP9] Project management; Responsible Dept. TUTELA DELL'AMBIENTE E ECONOMIA CIRCOLARE</p> <p>[Daniela] [FERRARA], [F], [Dir], [Project implementation WP9] Project management; Responsible Dept NATIONAL AND EUROPEAN FUNDS</p> <p>[Paola] [GAZZOLO], [F], [Councilor Agenzia regionale per la Sicurezza territoriale e la Protezione civile], [Project implementation WP9] Project management Councilor AGENZIA REGIONALE PER LA SICUREZZA TERRITORIALE E LA PROTEZIONE CIVILE</p> <p>[Lodovico] [GHERARDI], [M], [Senior expert], [Project implementation WP9] Project management; Senior expert Dept. EUROPEAN POLICY COORDINATION, PLANNING, INSTITUTIONAL REFORM AND TERRITORIAL DEVELOPMENT, PARTICIPATION, COOPERATION AND EVALUATION UNIT</p> <p>[Monica] [GUIDA], [F], [Dir], [Project implementation WP9] Project management; Responsible Dept. DIFESA DEL TERRITORIO</p> <p>[Olga] [SEDIOLI], [F], [expert], [Project implementation WP9] Project management; Expert Dept. TUTELA DELL'AMBIENTE E ECONOMIA CIRCOLARE</p> <p>[Teresa Maria Iolanda] [SCHIPANI], [F], [Dir], [Project implementation WP9] Project management; Responsible Dept. SVILUPPO DEL TERRITORIO E SOSTENIBILITÀ DELLE PRODUZIONI</p> | |
| Projects or Activities | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| ADRIACLIM project | |

GECO2 project

SPICC - Spatial Planning: Integration of Climate Change Adaptation Aspects project (not yet granted)

affiliated Entities / Associated Partners

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

N/A

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|---|-----------------------------|
| PARTICIPANT 18 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Piemonte Region (RPiemonte) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Coordination of regional complementary funding (WP2). Contribution to multilevel governance.</p> <p>Regione Piemonte is the body responsible for the implementation of the RBMP of the Po river for the Piemonte region (in agreement with D.lgs 152/2006). The Po RBMP in fact states: "...Regions, in their area of competence, are responsible of activities on the knowledge about its characteristics, on the impact of human activities and on its water status. They perform economic analysis on water use and, moreover, they are responsible for planning and implementation of interventions needed to implement the provisions of the RBMP. Finally, it is up to the regions the activity of dissemination of information" (Relazione Generale del Piano di Gestione del Distretto Idrografico del Po, chapter 17, page 133). Regione Piemonte also collaborates for the definition of the District Water Balance Plan in relation to strategies for adaptation to climate change too. In particular, the Water Protection Service (Settore Tutela delle Acque) of Regione Piemonte is the service officially appointed by the Regional Government as its delegate to exert the technical functions relating to water issues (see www.regione.piemonte.it/web/amministrazione/organizzazione/direzioni-settori-regionali/ for indications on the internal organization and specific tasks). All these activities are developed in coordination with Po River Basin Authority and the other Regions belonging to the Po River Basin.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Mancin] [Paolo], [M], [Manager], [Degree]</p> <p>Director of the Water Protection Sector. Experience in leading working groups for the achievement of objectives in the field of water resources planning, in a context of adaptation to climate change.</p> <p>[Clemente] [Floriana], [F], [Officer], [Degree]</p> <p>Official of the Water Protection Sector. Experience in the planning of surface water resources, in a context of adaptation to climate change.</p> <p>[De Meo] [Matteo], [M], [Officer], [Degree]</p> <p>Official of the Water Protection Sector. Experience in the planning of surface water resources, in a context of adaptation to climate change.</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>LIFE15IPEIT013, PREPAIR, Years 1/2/2017 – 31/01/2024, € 9.974.624, 84 months. CB: Regione Emilia-Romagna. Partners: Regione Piemonte et al. 16 partners.</p> <p>LIFE11 NAT/IT/000213</p> <p>TITLE: "CARABUS - Protection and species habitat conservation for the consolidation of the Carabus olympiae population in Valsessera"</p> <p>AMOUNT OF THE COFINANCING: 552.353,00 €</p> <p>PROJECT DURATION: 01/06/2012 to 31/12/2015</p> <p>COORDINATING BENEFICIARY: Ermenegildo Zegna Holditalia s.p.a.</p> <p>PARTNERS: Regione Piemonte Università degli studi di Torino, Dipartimento di Biologia Animale e dell'Uomo Comunità montana "Val Sessera, Valle di Mosso e Prealpi Biellesi" D.R.E.Am. Italia</p> <p>LIFE12 ENV/IT/000578</p> <p>TITLE: "HelpSoil - Helping enhanced soil functions and adaptation to climate change by sustainable conservation</p> | |

agriculture techniques”

AMOUNT OF THE COFINANCING: 1.308.381,00 €

PROJECT DURATION: 01/07/2013 to 30/06/2017

COORDINATING BENEFICIARY: Regione Lombardia - DG Agricoltura

PARTNERS: Regione Piemonte-DG Agricoltura, Italy Regione del Veneto-Direzione Agroambiente Veneto Agricoltura, Italy Centro Ricerche Produzioni Animali-CRPA S.p.A., Italy ERSAF, Italy Regione Emilia Romagna-DG Agricoltura, Economia Ittica, Attività Faunistico-Venatorie, Italy Regione Autonoma Friuli Venezia Giulia – Direzione centrale risorse rurali, agroalimentari e forestali, Italy

Alpine Space 2014-2020 (EUTC /EU funding /Project)

TITLE "Alpine Drought Observatory" - ADO

AMOUNT OF THE COFINANCING: 1.760.816 € (ERDF grant: 1.496.693,50 €)

PROJECT DURATION: 01/10/2019 to 30/09/2022

COORDINATING BENEFICIARY: EURAC Research (Accademia Europea di Bolzano)

PARTNERS: EURAC Research, Regione Piemonte, ANBI - Associazione Nazionale Consorzi Gestione Tutela Territorio ed Acque Irrigue, ARSO - Slovenian Environment Agency, KGZS MB - Slovene Chamber of Agriculture and Forestry - Institute of Agriculture and Forestry Maribor, ISKRIVA - Iskriva, Institute for Development of Local Potentials, ZAMG - Central Institute for Meteorology and Geodynamics, University of Freiburg, WSL - Swiss Federal Institute for Forest, Snow and Landscape Research, UA-WMP - Office of the Upper Austrian Government - Water Management Planning, INRAE - L'Istituto Nazionale di Ricerche Agronomiche

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Insert text

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| PARTICIPANT 19 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | REGIONE LOMBARDIA (RL) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Regione Lombardia is a local government body. Its role within the Project is a link between the activities envisaged in WP7 and the regional policies on flood risk mitigation and management taking into account climate change</p> <p>Collaborates with the District Basin Authority in the construction and implementation of the Flood Risk Management Plan which includes, among the protection measures, those aimed at the natural management of floods at the sub-basin scale through the restoration of natural systems capable of slowing the formation and propagation of floods by improving the retention, expansion and lamination capacity. Task 7 envisages an exemplary intervention of this type, included among the measures of the Plan, relating to a stretch of the Lambro river.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| [ROBERTO] [CERRETTI], [MALE], [MANAGER], [GEOLOGIST] | |
| Manager of the Soil Defence structure who deal with the planning and programming of soil protection and post seismic re-buiding interventions | |
| [IMMACOLATA] [TOLONE], [FEMALE], [MANAGER], [ENGINEER] | |
| Manager of the Hydrogeological Structure, Networks and Water State Property who deals with the implementation of the Basin Plan on a regional scale, the connection between basin planning and regional and local planning, | |
| [MARINA] [CREDALI], [FEMALE], [FUNZIOANRIO], [GEOLOGIST] | |
| Officer of the Hydrogeological Structure, Networks and Water State Property. It deals with the updating and implementation of basin planning, the construction of the integrated knowledge framework also for the purpose of coordinated implementation of the flood and water directives | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>PIANO E STRATEGIA REGIONALE DI ADATTAMENTO AI CAMBIAMENTI CLIMATICI</p> <p>PREDISPOSIZIONE E ATTUAZIONE DEL PIANO DI GESTIONE DEL RISCHIO ALLUVIONI E DEL PIANO DI ASSETTO IDROGEOLOGICO</p> <p>RIVER CONTRACT – Strategic river basin planning aim to river restotartion and to manage climate change</p> <p>GESTIRE (LIFE11 NAT/IT/044) - Sviluppo di una strategia per gestire la Rete Natura 2000 in Lombardia - Ruolo nel progetto: Partner</p> | |
| AFFILIATED ENTITIES / ASSOCIATED PARTNERS | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
| <p>ERSAF – Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF) - is the technical partner of the River Contracts in Lombardy and has experience in ecological connection projects along waterways. On the basis of these experiences, ERSAF coordinates task 7.1 which focuses on the sub-basin of the Northern Lambro River Contract. Furthermore, has experience in soils classification and characterisation, soil monitoring both from an environmental point of view and from different management technique. ERSAF organizes and carries out demonstration days in the field and knowledge transfer actions as well as activities to involve stakeholders.</p> | |

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| PARTICIPANT 20 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | SOGESCA |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>SOGESCA was founded in 1986 to offer environmental consulting services to public bodies and industrial enterprises. SOGESCA's technical team consists of 15 skilled, certified experts with a specific client-oriented training in the services and products offered. Engineers, chemists, geologists, biologists, agronomists, social and political science experts provide their competence and are ready to complete each other adequately to comply with the complex issues related to sustainable development, energy and work safety.</p> <p>SOGESCA is experienced in the climate and energy sector. It's working on a several projects and actions dealing with climate and energy planning, climate policies and regulations, the Covenant of Mayors (directly and indirectly supporting 80+ Italian Municipalities and working as technical support to Covenant Territorial Coordinators and Supporters), Environmental and Energy Management Systems and CO2 emissions management in the public sector as well as in the private one (ref. EMAS, ISO 140001, ISO 50001 and ISO 14064).</p> <p>SOGESCA has a 30+ experience in environmental management, including eco-design, sustainable product labelling, life cycle assessment.</p> <p>SOGESCA is experienced in technical and financial tools for the implementation of climate adaptation and energy efficiency measures and the implementation of technologies in both the private as well as in the public sector.</p> <p>SOGESCA has developed a guideline for the integration of EnMS and SEAPs/SECAPs (available on the Compete4SECAP web site and on ICLEI's online Toolbox of Methodologies on Climate and Energy),</p> <p>SOGESCA integrated EnMS and SEAPs in 8 Italian Municipalities (Moneglia, Recco, Maranello, Montecchio Maggiore, Matrostica, Federation of Camposampierese Local Authorities, Rubano). SOGESCA was the Coordinator the IEE-2013 50000and1SEAPs project on EnMS integrated with SEAPs and worked as expert partner in the H2020 Compete4SECAP project where it worked with 4 target Local Governments supporting them in the development of a SECAP and a certified Energy Management System according to ISO 50001 and their integrated implementation.</p> <p>SOGESCA is currently technical partner of the LIFE VenetoADAPT project focused on updating of existing SEAPs into SECAPs in the central Veneto Region (Padova, Vicenza, Treviso, Metropolitan Area of Venice and Union of Medio Brenta LAs) which covers over 3,5 millions of inhabitants.</p> <p>SOGESCA as expert partner is able to provide support for the managerial part of the project. At the same time, as expert consulting and engineering company, SOGESCA is able to provide its technical expertise for the structuring of the knowledge base (many years of experience in studies and surveys for state of the art analysis), support for the definition of the methodological approach and structuring of multi-level governance (multi-year experience in Local Agenda 21 and participatory processes), support for the development of transition roadmaps towards 2050 (experience in regional and local planning), support for the development of pilot actions (development of +80 SEAPs, +10 SECAPs in small, medium and big sized LAs at national level). Large experience in communication activities and impact indicators definition in EU projects and beyond.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| Camillo FRANCO – Hydraulic Engineer – M - Senior Expert - Technical director | |
| <p>He is an environmental, energy and system audit expert, in the industrial and public sector. He is member of the Association of Environmental Analysts and Member of the Environment Technical Committee of the Organisation for the Certification of Staff for Service's Enterprises (CEPAS).</p> <p>Expert in planning & implementation of SEAPs, SECAPs and Environmental Management Systems according to EMAS and ISO 14001 with direct experience in several public administrations and private industries. Deep knowledge of ISO 14001 and ISO 50001 standard and EnvMS in general. Senior Auditor for ACCREDIA, Italy's national accreditation body.</p> | |
| Elena Masiero – Environmental Engineer – F – Expert – Environmental Technician, climate risks and vulnerabilities analysis and assessment in SECAPs | |
| Expert in mapping, analysis and assessment of risks and vulnerabilities related to climate change at the local level. | |

Technical expert for analysis and risk assessment for SECAPs in VenetoADAPT and Compete4SECAPs Projects for the cities of Padova, Treviso, Vicenza, Metropolitan Area of Venice, Union of Municipalities of Medio Brenta, San Vito di Leguzzano, Udine, Abano Terme, Rubano. Technical expert for the identification, assessment and development of mitigation and adaptation measures to climate change with a time horizon of 2030 and beyond. Expert in environmental impact assessment and strategic environmental assessments for public authorities (Municipalities of Monselice, Limena and Gazzo Padovano).

Emanuele Cosenza – Political scientist – M – Expert

Expert in EU and National climate and energy policies. Expert consultant to Municipalities in energy and climate planning, SEAPs and SECAPs development and implementation (60+ SEAPs developed and currently working on 8 SECAPs), integration of EnMS according to ISO 50001 in SEAPs (4 LAs + 1 Federation of LAs) and SECAPs (currently supporting 4 LAs), stakeholders engagement. Expert in policy strategies and visioning, Regional Energy Plans development (Veneto Region Energy Plan). Expert in European, national and local peer-to-peer and training session activities and roundtables in terms of management and organization (IEE Meshartility, IEE 50000&1SEAPs, H2020 Compete4SECAP, LIFE VenetoADAPT).

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

Project: LIFE VenetoADAPT

Intends to develop a methodology and operational tools for adaptation to climate change that can be replicated for a more resilient Europe, optimizing and making more effective the capacity for response at the regional level to the impact of climate change. In particular, the project will develop a replicable operational methodology to optimize and make more effective the capacity to respond at the regional level to the impact of climate change, with a specific focus on hydrogeological risk, through a qualified network of cities in the Central Veneto region. Development of SECAPs/Joint SECAPs in Padova, Treviso, Vicenza, Metropolitan Area of Venice and Union of Medio Brenta LAs.

Funded by: LIFE 2017

Running time: 2017-2021

Budget: 180,000

Website: <https://www.venetoadapt.it/>

Project: ARCH

Research and innovation project focused on climate adaptation and resilience actions in historical centres and diffuse urban areas. A specific focus is dedicated to innovative financing schemes for adaptation.

Funded by: HORIZON 2020

Running time: 2019-2022

Budget: 300,000

Website: www.savingculturalheritage.eu

Project: Compete4SECAP

Combined development of SECAPs/Joint SECAPs and Energy Management Systems 50001:2018 plus energy saving competition among LAs on Public Buildings (96 buildings in total taking part in the competition in 8 target countries). Update of existing SEAPs in SECAPs for a total of 32 SECAPs in 8 target countries, Energy Management Systems certification in 32 LAs or group of LAs.

Funded by: H2020 2017

Running time: 2017-2020

Budget: 260,000

Website: <http://compete4secap.eu>

Project: 50000and1 SEAPs

Combined development of SEAPs and energy management systems to improve the quality of development of EE and RES actions in LGs but also to improve the quality of implementation and monitoring of the actions

Funded by: IEE 2013

Running time: 2014-2017

Budget: 200,000 (SOGESCA)

Website: www.50001seaps.eu

Publication: Data sharing in the electricity sector within the “Covenant of Mayors” initiative – article within the annual report of the Italian Ministry of Environment on Climate Change and Mitigation

Good practices in energy data exchange between distributors/utilities and Local Governments for planning purposes - 2014

Link: <http://www.isprambiente.gov.it/it/pubblicazioni/statodellambiente/focus-su-le-citta-e-la-sfida-ai-cambiamenti-climatici>

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Not applicable

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| PARTICIPANT 21 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | ARPA della Lombardia (ARPALO) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>Partner in WP5 and WP7: Contribution to tools and indicators development.</p> <p>ARPA Lombardia is the regional environmental protection agency established in 1999, which carries out on environmental monitoring and control activities.</p> <p>The hydrometeorological service is part of the civil protection system of Regione Lombardia. For this purpose, it makes weather forecasts and manages the automatic hydrometeorological gauging station network. Everyday weather forecast is customized for the regional civil protection system which is provided by Arpa Lombardia to support the warning and the emergency management system. The meteorological automatic network (rain, discharge, temperature, speed and direction wind, relative humidity, pressure) is composed by nearly 300 automatic stations which send data every 10 minutes at the central database located in ARPALO. At the moment, ARPALO is also installing three X-band radars for precipitation measuring over urban areas with high spatial-temporal resolution. As a potential final user, in WP7, ARPALO will contribute to the development of warning tools, with its data and its expertise on urban areas and fast response catchments.</p> <p>In agreement with D.lgs 152/2006 and the water framework directive 2000/60, ARPALO collaborated with Regione Lombardia in the definition of the Regional Water Balance, published in 2019. ARPALO also cooperates with the other institutions, belonging to the Po River District, in the implementation of the District Water Balance Plan. All these activities are developed in coordination with Po River Basin Authority and the other Regions belonging to the Po River Basin. During drought events ARPALO provides data and indicators to assess the drought severity. The data are used by the water authorities to take decisions in order to better manage those events. As a potential final user, in WP5, ARPALO will contribute in the development of the models and the indicators over the Po Basin, with its data and its expertise on water balance.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>[Orietta] [Cazzuli], [F], [Manager], [Degree]</p> <p>Director of the Hydrometeorological service of ARPA Lombardia. Experience in leading working groups for the achievement of objectives in the field of Civil protection and water resources management, in a context of adaptation to climate change.</p> <p>[Matteo] [Cislaghi], [M], [Officer], [Degree, PhD]</p> <p>Official of Hydrometeorological service. Experience in monitoring network management, flood and water balance modelling and data analysis for climate change assessment.</p> <p>[Paola] [Parravicini], [F], [Officer], [Degree]</p> <p>Official of Hydrometeorological service. Experience in monitoring network management, discharge measuring and water balance models in a context of adaptation to climate change.</p> <p>[Sara] [Di Priolo], [F], [Officer], [Degree]</p> <p>Official of Hydrometeorological service. Experience in GIS spatial analysis, discharge measuring and water balance models in a context of adaptation to climate change.</p> <p>[Alexander Fredy] [Pena], [M], [Officer], [Degree, Msc]</p> <p>Official of Hydrometeorological service. Experience in discharge measuring, ground water modelling and transboundary water management, in a context of adaptation to climate change.</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| DEWS (2016-2019, budget 321.000€). Project funded by the Regione Lombardia Government. Water balance | |

estimation over all the rivers of Lombardy (over 700 river branches). Published on official bulletin of Regione Lombardia: (DGR 2122/2019)

STRADA 2.0 (2014-2015, budget 90.000€). Italy-Switzerland Interreg project. Estimation of civil protection thresholds for precipitation and river water levels over all Regione Lombardia.

FLORA (2009-2011, budget 125.000€) Italy-Switzerland Interreg project. Discharge long time series digitalization (from 1970) and peak discharge return period evaluation.

STRADA (2009-2011, budget 311.500€) Italy-Switzerland Interreg project. Rainfall annual maxima digitalization (from beginnings of XX century), rainfall intensity duration curve estimation, ground rainfall and radar precipitation data assimilation, monitoring network development and avalanche risk assessment.

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 22 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | ANBI EMILIA ROMAGNA (ANBIER) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ANBI Emilia Romagna associates and represents all the reclamation consortia operating on the regional territory (9) and other bodies involved in soil protection and resource management water; it is part of the national ANBI (National Association for the management and protection of the territory and irrigation water); it promotes the development and qualification of the reclamation system by making a culture grow of making common but at the same time capable of enhancing local specificities; represents the needs, the requests and proposals of the regional reclamation system towards political institutions and administrative; activates and develops a system of external alliances, contacts and synergies with public entities and private individuals involved in the management of the territory for the realization of common projects; puts resources online, skills and abilities of the associates, promotes the coordination of their activities, creates and develops projects and provides communication and organizational management services. ANBI ER will contribute to success of ClimaXPo with the inclusion of environmental issues in the educational programming of schools of all levels (first and second degree), university and professional; to the development of a network climate adaptation education district connected to the water sector and all the activities that they depend on it, for the agricultural and land reclamation sectors; will integrate e ongoing training on adaptation to climate change coordinating it with the other activities of the action; will provide materials and data to be integrated into the teaching modules; will contribute with its sectoral skills the design and development of serious games and contests for the stable introduction of the topics – management water, climate science and its change - in primary school training courses and secondary. ANBI ER will contribute with its technical-scientific capacity to the organization of seminars, workshops, training courses in the hydraulic defence, irrigation and management and mitigation sectors hydrogeological instability for sector experts and stakeholders.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>Patrizia Narducci, female, extensionist</p> <p>She is responsible of ANBIER communication and training/education activities. She is also coordinating the communication activities for the Regional Level of the ANBIER associated Consortia. She is in charge of the organisation of the ANBIER participation to the MACFRUT exhibition, since 2018, organising workshops, seminars, side events and managing public relations. She is engaged in the cooperation with Ministry of Education.</p> <p>Tania Pejovic, female, extensionist</p> <p>She collaborates to ANBIER communication and training/education activities. She is also cooperating with the communication activities for the Regional Level of the ANBIER associated Consortia. She collaborates also to the organisation of the ANBIER participation to the MACFRUT exhibition, since 2018, organising workshops, seminars, side events and managing public relations. She is also engaged in the cooperation with Ministry of Education.</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>Podcast “Onde d’Acqua” https://www.anbiemiliaromagna.it/?page_id=7513</p> <p>ACQUA E TERRITORIO TV https://www.anbiemiliaromagna.it/?approfondimenti=acqua-territorio-tv</p> <p>Progetti per le scuole https://www.anbiemiliaromagna.it/?cat=17</p> <p>Rebus Web Service: a GIS (Geographic Information System) software, which allows interactive geographical consultation of information relating to the hydraulic system managed by the Reclamation Consortia in the Emilia Romagna Region</p> | |
| AFFILIATED ENTITIES / ASSOCIATED PARTNERS | |
| <i>Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.</i> | |
| n.a | |

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| PARTICIPANT 23 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | ASSOCIAZIONE REGIONALE CONSORZI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE (ANBI LOMBARDIA) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ANBI Lombardia was established in 1990 as Voluntary association with legal identity. The current statute, approved and registered in 2018, defines the institutional mission of the Association: raise public and policy makers awareness about the role of land reclamation and irrigation as an important public action for territories and waters protection, defence, and enhancement. Currently, 12 Land Reclamation Consortia are members of ANBI Lombardia together with 5 consortia which regulate the lakes and numerous private irrigation consortia, some of great importance. In total the area of the land that is irrigable is 700.000 hectares, which home the productive agricultural farms which place Lombardy among the top in Europe for efficacy and the quality of its products. All the plains and the most productive agricultural areas, as well as the main cities, are served by ANBI associates. ANBI Lombardia collaborates with numerous public and private institutions for activities of common interest through agreements and conventions, among them Regione Lombardia (Data Centre - CeDATeR) the Italian Government Agricultural Ministry (SIGRIAN), Regional Environmental Protection Agency - ARPA Lombardia, University of Milan – UNIMI, Coldiretti (farmers' association). The Association carries out technical assistance to its own associated; organises research and studies on the most relevant and topical issues for the agricultural water governance and irrigation sector; organises conferences, meetings and debates for the in-depth study of the problems of the agricultural water sector; promotes and facilitates education, training and capacity building activities directed internally or towards school pupils, universities, decision makers. Finally, ANBI Lombardia carries out, directly and / or through its associates, cultural and educational projects, actions and initiatives for the knowledge, promotion, enhancement and multifunctional management of its own heritage and cultural assets.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| Gladys Lucchelli, female, Director, Director ANBI Lombardia | |
| <p>Lucchelli has a master's degree in public administration. She worked in Regione Lombardia carrying out legal issues about land reclamation and irrigation. From 2006 to 2012 she worked as director of land reclamation consortium Valle del Ticino. Since 2013 she worked as manager at irrigation and land reclamation consortium Associazione Irrigazione Est Sesia. Since 2019 she worked as director of ANBI Lombardia. Lucchelli oversees ANBI Lombardia relations with land reclamation Consortia, Regional Government and other associations and organisations. She is also in charge of the legal aspect of water management and of the interrelations with Italian authorities.</p> | |
| Tatiana Pellitteri, female, Employee, Cultural and educational projects officer | |
| <p>Pellitteri has a degree in architecture at the Politecnico di Milano. Pellitteri has 2 <i>master</i> in "<i>Conservazione, gestione e valorizzazione del patrimonio industriale</i>" (conservation of the Industrial Heritage) and "<i>Progettazione e valorizzazione del paesaggio</i>" (protecting the landscape and the environment). She participated in several projects related to the protection of the territory, irrigation water and the safeguarding of the areas of land reclamation. She has over 10 years' experience in regional cultural and educational projects. She also worked as organiser and curator of many photography exhibitions, such as "<i>Lombardia d'acqua</i>" at Palazzo Lombardia, "<i>La civiltà dell'acqua in Lombardia</i>" at Triennale di Milano and "<i>Le acque lombarde da Leonardo a Cattaneo</i>".</p> | |
| Fabio Olivotti, male, Employee, CeDATeR officer | |
| <p>Fabio Olivotti achieved in 2012 a master's degree in environmental sciences and technologies at the University of Milan Bicocca, he has developed his studies and acquired work experiences in the field of Geographic Information Systems (GIS) and in the management of environmental issues using geospatial data. Since 2015 he works in the field of irrigation and reclamation for ANBI Lombardia and he contributed to the creation of the Water and Rural Territory Data Center (CeDATeR). Within CeDATeR data center he manages several data and projects about irrigation systems and irrigation water use and he use also mathematical simulation models for calculating irrigation needs with the scientific support of University of Milan (UNIMI).</p> | |
| Stefano Roverato, male, Employee, CeDATeR officer | |
| <p>Stefano Roverato holds a master's degree in environmental science and a research experience focused on geospatial data through the use of open-source GIS. Since 2015 he works in ANBI Lombardia carrying out projects aiming to</p> | |

analyse the use of water in agriculture (ISIL), in order to plan how to contrast the effects of climate change on it. Within CeDATeR data centre he manages the regional monitoring system of catchment and agricultural water uses, counting hundreds of measurement devices which measure the daily water volume coming from the natural water bodies. He also manages simulation models of crop needs together with University of Milan (UNIMI) to calculate the effective use of water for irrigation.

PROJECTS OR ACTIVITIES

List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.

CeDATeR (Centro Dati Acqua e Territorio Rurale): ANBI Lombardia data centre aims to analyse the use of water in agriculture. Since 2017, CeDATeR collects data coming from hundreds of measurement devices spread around the whole region depicting how much water is taken from natural bodies and how much water is provided to the irrigation districts. The same data is transmitted to SIGRIAN database, holds by Italian Government Agricultural Ministry and directly connected to EU.

European Agricultural Fund for Rural Development (EAFRD 2014-2022): technical and scientific support to Regione Lombardia for the definition and management of the call on investments in efficiency of irrigation systems (PSR 2014-2022 Operation 4.1.3). The currently active collaboration consists of several activities such as:

- Defining the selection criteria for the call
- Drafting of the guidelines for the development of the project to be attached to the applications
- Producing geospatial data with the spatial distribution of the irrigation needs to be used in the processing required for the presentation of the application
- Creation of a public section on the CeDATeR web portal for publishing data on irrigation needs and support for the preparation of the “Business Plan for water saving”

OsservaTeR – Osservatorio del Territorio rurale e La civiltà dell’acqua in Lombardia (the culture of water in Lombardy): this projects, developed with Regional Government, explored and presented the lombardy agricultural landscape in all its forms through multiple commissions on the part of Lombardy Region and ANBI Lombardia, that involves a number of important Italian photographers. The resulting photography, thanks to the culture of its protagonists, does not merely illustrate the sites, nor is it a flat, generic document. Instead it represents a sensitive reading of the territory, based on expert observation of the sites blended with the imagery of the authors, who have imbued these images with the sense they constantly strive for in photographing the complexity of the world. The photographic campaign *La civiltà dell’acqua in Lombardia* create a travelling photographic exhibition of high artistic, cultural and promotional value; and shows the importance and the specific nature “culture of water” in Lombardy.

AcquaPluSS (Acqua Plurima per lo Sviluppo Sostenibile): proposes a series of interventions to be implemented on an experimental basis on distinct areas of the Lombard irrigation plain. The proposed interventions are aimed at introducing innovative technologies and management systems for saving water, promoting the tourist-recreational activities, protecting the environment and the landscape.

Vi.A.Ter (Vie di acqua e di terra): this project, developed with Regional Government, involved the creation of paths for cyclists and walkers covering more than 500 km. The project is now part of “Vie della Bonifica”, a series of guide for cyclists describing several tours along historical canals.

Progetto Scuola: project dedicated to students for the knowledge of the agricultural landscape, irrigation systems and environmental issues. The project proposed a photo contest.

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

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| PARTICIPANT 24 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | Unione Regionale Bonifiche Irrigazioni Piemonte (ANBI Piemonte) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ANBI PIEMONTE was born as an Interregional District Piedmont - Liguria in 1952, following the approval of the Statute of the National Reclamation, Irrigation and Land Improvement Association (ANBI) to associate and represent all the reclamation and irrigation consortia and other bodies operating in the area in the field of soil defence and management of water resources, already members, at national level. It currently has 24 members. ANBI Piemonte has financial and statutory autonomy and has its own organization.</p> <p>It represents the needs and proposals of the entire Piedmontese regional reclamation system towards political and administrative institutions, the Bodies of the Region, the State Offices and the local territorial bodies, the economic and trade union organizations of the territory.</p> <p>It identifies the political and programmatic guidelines for the reclamation and irrigation activities in the Region and takes care of their coherent implementation, collaborating with the competent Authorities for the formation of regional economic and social development, planning, protection programs and use of the regional territory.</p> <p>It favours and promotes at the regional level the development of initiatives (studies, planning, implementation and interventions) for reclamation, irrigation, land improvements as well as, in the field of actions for soil and water defence, environmental protection and the territorial structure.</p> <p>ANBI PIEMONTE carries out coordination functions of the numerous Piedmontese irrigation consortia where the realities of private law that arose with ancient associative dynamics for a careful and thrifty distribution of the irrigation resource and water management by integrating the needs of the large rice irrigation consortia, where it is produced, are prevalent almost 90% of Italian rice (over 50% of European rice) with the requests of the Piedmont (Cuneo and Turin) and pre-Apennine (Alessandria) consortia.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| <p>Provvidenza Faliero, Female, office manager, water resources and territory office</p> <p>Faliero is a geologist and holds the role of officer in charge of the water resources and territory office of the Est Sesia Irrigation Association, she deals with the management of administrative aspects concerning water supply and, in general, territorial planning in the area of competence, managing relations with the Public Administration. The Associazione Irrigazione Est Sesia is an irrigation and reclamation consortium that plays the role of secretariat and technical support of ANBI Piemonte and Faliero deals with aspects related to water resources, environmental protection, hydrogeological defence and territorial planning.</p> <p>Serena Ladetto, Female, Employee, water resources and territory office</p> <p>Ladetto is an agronomist in the “water resources and territory office” of the Est Sesia Irrigation Association, she deals with the agronomic aspects related to territorial planning and management of the irrigation system. In the past, she has worked as a social media manager and communicator, creating the social profile of the Association</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p>Support activities for the project partner ANBI in the Alpine Drought Observatory project – ADO: Interreg Alpine Space Priority 3 - Liveable Alpine Space. ADO aim is to set up an Alpine Drought Observatory (ADO) and to derive recommendations for improved risk preparedness and efficiency of drought management, specifically, for the Alpine territory. The ADO itself will be a transnational Alpine-wide operational system with a web-interface (e.g. WebGIS, periodic reports) https://keep.eu/projects/23262/Alpine-Drought-Observatory-EN/</p> | |

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Insert text

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| PARTICIPANT 25 (use same partner numbering as on Submission System screens). | |
| Legal name (short name): | ASSOCIAZIONE REGIONALE CONSORZI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE (ANBI VENETO) |
| DESCRIPTION OF PARTICIPANT | |
| <i>Provide a short description of the participant, with an explanation on how it matches its main role and tasks in the proposal.</i> | |
| <p>ANBI VENETO was established as a regional Association of the Agricultural water boards (ConSORZI di Bonifica) of Veneto, affiliated to ANBI until its foundation. The current statute, approved in 2015, it defines the institutional mission of the Association: raise public and policy makers awareness about the role of land reclamation and irrigation as an important public action for territories and waters protection, defence and enhancement. Presently all the 11 regional <i>ConSORZI di Bonifica</i> are members of ANBI Veneto, covering the entire regional irrigated agricultural area.</p> <p>ANBI collaborates with numerous public and private institutions for activities of common interest through agreements and conventions, among them the Veneto Region (regional administration), Veneto Agricoltura (regional agency for agriculture), University of Padua, Credit Agricole Friuladria bank (development of a study of the resurgences in Veneto), the Eastern Alps District Administration (experimental evaluation of river ecological flow, drought plans).</p> <p>The Association, by itself or in collaboration with ANBI, carries out technical assistance to its own associated; organises research and studies on the most relevant and topical issues for the agricultural water governance and irrigation sector; organises conferences, meetings and debates for the in-depth study of the problems of the agricultural water sector; promotes and facilitates education, training and capacity building activities directed internally or towards school pupils, universities, decision makers.</p> | |
| KEY STAFF | |
| <i>Provide a short description of the profile of the persons who will be primarily responsible for carrying out the proposed activities.</i> | |
| Filippo MORETTO, male, employee, technical officer | |
| <p>Moretto holds a Master's degree in Environmental Sciences at Ca' Foscari University of Venice, and a post lauream master program in Geography. He develops technical understanding of laws, standards and environmental topics and he operates in collaboration with the affiliated technical representatives. In earlier work experiences he was appointed as "Senior Expert" at SOGESID SPA – Ministry of Environment for the implementation of the "Creaimo PA" project (PON Governance financed project).</p> | |
| Mauro POLETTI, male, employee, communication officer | |
| <p>Poletto is Press and communications officer, expert social media manager. Over time, he has been involved in the management of activities related to communication, favouring an important growth of the social pages, reaching all the foreseen dissemination targets. In particular, he has worked in support of corporate strategies aimed at increasing knowledge of the areas of the activities of the reclamation consortia, implementing the existing ones with new activities.</p> | |
| Sonia BASSO, female, employee, administrative officer | |
| <p>As Administrative Officer she acts as the point of contact for all employees, providing administrative support and managing their necessities. Main duties include managing office and project stock, preparing regular reports (e.g. expenses and office budgets) and organizing company records.</p> | |
| PROJECTS OR ACTIVITIES | |
| <i>List of up to 5 relevant previous projects or activities, connected to the subject of this proposal.</i> | |
| <p><u>Irriframe platform</u>: Anbi Veneto provides technical assistance for the management in Veneto of Irriframe platform (developed by ANBI) to the users. The Veneto region finance this activity as technical assistance in the Regional Rural Development Plan (PSR – CAP 2014-21). https:// www.irriframe.it/Irriframe</p> <p>The Agriculture Water Boards of Veneto participated in a number of financed projects, as:</p> <p>LIFE TRUST – 2009 – 2011 Toll for Regional scale of groundwater Storage improvement in adaption to climate change</p> <p>LIFE AQUOR – 2011 - Implementazione di una strategia partecipata di risparmio idrico e ricarica artificiale per il</p> | |

riequilibrio quantitativo della falda dell'alta pianura vicentina

LIFE RISORGIVE – for resurgences restoration in the area of Brenta River;

NICOLAS – project for environmental protection of Venice Lagoon (financed by the Veneto Region)

AFFILIATED ENTITIES / ASSOCIATED PARTNERS

Does the participant envisage that part of its work is performed by affiliated entities or associated partners? If yes, please describe the entity / partner, their link to the participant, and describe and justify the tasks foreseen to be performed by them.

Not applicable

| VERSION | PUBLICATION DATE | CHANGE |
|---------|------------------|--|
| 1.0 | 15.04.2021 | Initial version (new MFF). |
| 2.0 | 25.10.2022 | <p>First revision version - changes according to LIFE21 SIPC GAP-IT-9928.docx revision points:</p> <p><u>IMPACT</u></p> <ul style="list-style-type: none"> - Optimized the description of the KPI indicator for climate resilience (ie "population density exposed to the risk of floods throughout the territory of the District") in chapter 2.1 "Impact and ambition" in the section "INDICATORS AND QUANTIFIED IMPACT OBJECTIVES", in particular, the hypothesis considered to compute this index have been introduced and the reference area has been clarified - The experiences of partners have been introduced as justification for the percentages of reduction expected for the Water Efficiency indicator in chapter 2.1. <p><u>IMPLEMENTATION</u></p> <ul style="list-style-type: none"> - The "complementary funding plan" (Annex, Part B) has been updated by adding for each CA the list of detailed sub-actions to which they apply, where applicable - Task 4.6.1 "Data Collection" has been deleted and moved to task 8.2.2 given their strict connection and content affinity - For the Pilot Actions (WP 5-8), the list of transversal indicators needed to obtain quantitative information and demonstrate replication potential has been identified - Since not all indicators identified in WP9 will be present in the KPI table but used for internal monitoring and documented in a technical report. This significantly increases the number of KPIs that will then be evaluated in the initial project phase. A dedicated milestone and deliverable have been specifically introduced - Addition of milestone MS9.4 "Set KPIs for co-benefits indicators to Nature and Biodiversity" - Addition of deliverable D9.8 "Assessment and selection of the KPIs" - Introduction in task 11.1 of a point related to the staff recruited/trained during the project (i.e., "Ensuring that the staff recruited/trained during the project will continue to work on the implementation of the NAS at District level (WP2 – WP10)") - Addition in task 11.6 of a list of results expected from peer-to-peer, replication, and exchange activities - Introduction of a detailed description of the CLIMACTPACT4PO and PLEDGE4RIVER initiatives (activity 10.2) distinguish between types of audiences - The addition of new stakeholders in Chapter 3.2, distinguishing between different types of stakeholders (e.g., national, regional, international) - Adding the milestone MS4.1 "Get from support letters" to take into consideration also the support letters that arrived after the proposal phase. <p><u>RESOURCES</u></p> <ul style="list-style-type: none"> - Introduction of more details on subcontracted items above 100,000 euros for ADBPO (WP 6), AIPO (WP 6), ARPAAE (WP 3 and 7), ERSAP (WP 4) and POLITO (WP 6) in the "Detailed budget table" - Moved of "Independent financial audit - at the end of each phase" cost to "other goods and services" category in the "Detailed budget table" - We have added of further details on "Other Direct Cost" items. <p><u>COMPLEMENTARY FUNDING</u></p> <ul style="list-style-type: none"> - Addition of more details on the funds status in the Complementary Funding Plan |

| | | |
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| | | <p>- Correction of the details associated with the Regional Programme 2022-2027 - 14/12/2022 Complementary Funding Declarations.</p> |
| 3.0 | 09.11.2022 | <p>Second revision version - changes according to LIFE21 SIPC GAP-IT-9928-RBR_LG fin.docx revision points:</p> <p><u>DATA REQUIRED TO COMPLETE THE GRANT AGREEMENT</u> <u>We have updated and detailed the equipment list in the detailed budget table</u></p> <p><u>IMPACT</u></p> <ul style="list-style-type: none"> - We have added further details in chapter 2.1 with respect to the reduction of water supply by specifying that the latter is not only related to agriculture activities. <p><u>IMPLEMENTATION</u></p> <ul style="list-style-type: none"> - Optimisation of the description of the links between complementary actions and project actions in the file "Complementary funding plan" - Introduction of the section "Links between the Complementary Actions and funds" at the end of each WP to which some complementary funds are related - Removal of complementary funds related to ADRIACLIM, GECO2 and SPICC projects - Improvement of the description of two relevant quantifiable indicators in task 9.1, namely "Number of municipal administrations involved in the process (WP8)" and "Extension of agricultural canal network" - Addition of considerations on the co-benefits related to activities evaluated with different KPIs in task 9.1 highlighting that all the possible co-benefits need further analysis to be properly identified and they will be identified and accurately described at an early stage of the project within the dedicated deliverable - Introduction in task 9.3 of description related to the monitoring of the NAS - especially related to the non-water starting from the number of replicated pilot actions and/or the participation of the project partners within the SEAPs produced in the basin area - Addition of item "Ensuring that the staff recruited/trained during the project will continue to work on the implementation of the NAS at District level (WP2 – WP10)" in the risk management table (chapter 4.5) <p><u>RESOURCES</u></p> <ul style="list-style-type: none"> - Addition of more detailed justifications for some equipment and other goods, works and services. |
| 4.0 | 18.11.2022 | <p>Third revision version - changes according to LIFE21 SIPC GAP-IT-9928_updat 17 Nov.docx revision points:</p> <p><u>IMPACT</u></p> <ul style="list-style-type: none"> - In chapter 2.1, we have specified that further breakdown of actual water saving per user group will be provided, whenever they become available/ can be realistically determined during the cause of the project <p><u>IMPLEMENTATION</u></p> <ul style="list-style-type: none"> - Re-introduction of ADRIACLIM and GECO2 projects in the complementary funds' list - Addition of a missing fund item in "Links between the Complementary Actions and funds" of WP 9 <p><u>RESOURCES</u></p> <ul style="list-style-type: none"> - Addition of justification in "Other goods, works and services" for ADBPO and ERSAP. |
| 5.0 | 21.11.2022 | <p>Fourth revision version - changes according to LIFE21 SIPC GAP-IT-9928_updat_18Nov-with comments Tech monitor.docx revision points:</p> <p><u>RESOURCES</u></p> <ul style="list-style-type: none"> - Re-introduction of the justification related to the external audit costs for ADBPO and the related amount (90,000 euros) |

| | | |
|-----|------------|---|
| | | <ul style="list-style-type: none"> - Moved a justification  associated with document Ref. Arns(2022)8672725 - 14/12/2022 to "Infrastructure" for ERSAF. |
| 6.0 | 02.12.2022 | <ul style="list-style-type: none"> - Changed the Detailed budget table for AIPO and ERSAF by moving the infrastructure cost items to the equipment row - Added 3 progress report. |

LIFE21-IPC-IT-LIFE CLIMAX PO

Important:

You may add rows but no additional tabs. This may result in your proposal being considered inadmissible.
Please ensure that the file can be printed on a format of 1 page wide (number of pages depending on the number of participants).
Please make sure that the figures in this table are consistent with the total budget provided in part A section 3 of the application.
In case of inconsistencies, part A will prevail.

Staff effort allocation

Fill in the effort per work package and Beneficiary/Affiliated Entity.
Please indicate the number of person-months over the whole duration of the planned work.
Adapt the columns to the number of work packages in your proposal.
Identify the work-package leader for each work package by showing the relevant person-month figure in bold.

| Participant Number/Short Name | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | WP7 | WP8 | WP9 | WP10 | WP11 | Total |
|---|--------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| 1. ADBPO | 46.3 | 36.4 | 20.5 | 25.5 | 52.7 | 20.9 | 16.4 | 19.1 | 22.7 | 15.9 | 22.7 | 299.1 |
| 2. AIPO | 5.1 | 8.2 | 0 | 5 | 13.6 | 26.4 | 1.8 | 0 | 0 | 7.3 | 5 | 72.4 |
| 3. ARPAAE | 5.1 | 12.3 | 33.2 | 1.8 | 1.8 | 0 | 54.1 | 0 | 0 | 1.8 | 4.5 | 114.6 |
| 4. ARPAP | 5.1 | 10 | 29.5 | 0.9 | 41.4 | 0 | 50 | 12.7 | 0 | 7.1 | 1.5 | 158.2 |
| 5. UNIBO | 4.7 | 3.6 | 0 | 14.5 | 0 | 8 | 104.5 | 8 | 109.1 | 27.3 | 5.9 | 285.6 |
| 6. ANBI | 4.7 | 5.9 | 0.9 | 3.6 | 0 | 0.5 | 0 | 3.6 | 0 | 5 | 5 | 29.2 |
| 7. CMCC | 1.1 | 9.6 | 35.1 | 7.7 | 21.5 | 12.3 | 65 | 7.7 | 0 | 13.6 | 0 | 173.6 |
| 8. CMBO | 4.7 | 15.5 | 0 | 40.5 | 0 | 0 | 6.8 | 0 | 18.2 | 22.7 | 10 | 118.4 |
| 9. ERSAF | 1 | 2 | 0 | 9 | 0 | 33 | 0 | 60 | 18 | 1.8 | 2 | 126.8 |
| 10. LEGAMBIENTE | 9.6 | 11.4 | 0 | 25.5 | 0 | 0 | 0 | 0 | 4 | 108 | 8.6 | 167.1 |
| 11. Legambiente Lombardia (PA) | 1.2 | 1.8 | 0 | 8.2 | 0 | 0 | 0 | 0 | 0 | 36.4 | 0 | 47.6 |
| 12. Legambiente Veneto (PA) | 1.2 | 1.8 | 0 | 8.2 | 0 | 0 | 0 | 0 | 0 | 36.4 | 0 | 47.6 |
| 13. Legambiente Piemonte e Valle d'Aosta (PA) | 1.2 | 1.8 | 0 | 8.2 | 0 | 0 | 0 | 0 | 0 | 36.4 | 0 | 47.6 |
| 14. Legambiente Emilia-Romagna (PA) | 1.2 | 1.8 | 0 | 8.2 | 0 | 0 | 0 | 0 | 0 | 36.4 | 0 | 47.6 |
| 15. POLITO | 4.7 | 2.7 | 0 | 14.5 | 89.1 | 75 | 45.5 | 25 | 0 | 27.3 | 5.9 | 289.7 |
| 16. SMAT | 4.7 | 13.6 | 0 | 9.1 | 0 | 0 | 25 | 0 | 2.7 | 1.8 | 0.9 | 57.8 |
| 17. RER | 4.7 | 15.9 | 0 | 8.2 | 0 | 0 | 0 | 0 | 0 | 1.8 | 4.5 | 35.1 |
| 18. Rpiemonte | 4.7 | 15.9 | 0 | 8.2 | 10 | 0 | 0 | 0 | 0 | 1.8 | 4.5 | 45.1 |
| 19. Rlombardia | 4.7 | 13.2 | 0 | 9.1 | 10 | 4.5 | 0 | 0 | 0 | 1.8 | 4.5 | 47.8 |
| 20. SOGESCA | 9.2 | 2.7 | 0 | 32.3 | 0 | 0 | 0 | 0 | 4.5 | 4.7 | 0.9 | 54.3 |
| 21. ARPALO | 3.6 | 5.7 | 6 | 1.2 | 6 | 0 | 0 | 0 | 0 | 1 | 1.2 | 24.7 |
| 22. ANBI ER | 2 | 1.8 | 0 | 2.5 | 0 | 0 | 0 | 4.5 | 0 | 8.2 | 5.5 | 24.5 |
| 23. ANBI LO | 2 | 1.8 | 5.5 | 3 | 0 | 0 | 0 | 3.6 | 0 | 3.6 | 4.1 | 23.6 |
| 24. ANBI P | 2 | 1.8 | 1.4 | 2.5 | 0 | 0 | 0 | 4.5 | 0 | 3.6 | 3 | 18.8 |
| 25. ANBI VE | 2 | 1.8 | 1.4 | 2.5 | 0 | 1.8 | 0 | 4.5 | 0 | 5.5 | 4.5 | 24 |
| Total person-months | 136.5 | 199 | 133.5 | 259.9 | 246.1 | 182.4 | 369.1 | 153.2 | 179.2 | 417.2 | 104.7 | 2380.8 |

Personnel costs

Present your estimated "Personnel costs" split into 3 categories as per the table below. If you do not have any personnel costs falling under "A.4 SME owners and natural person beneficiaries" or "A.5 Volunteers", all personnel costs should be budgeted under "A1. Employees (or equivalent); A2. Natural persons under direct contract and A3. Seconded Persons".

For A.4 SME owners and natural person beneficiaries: please note that as per Annex 2a of the LIFE General Model Grant Agreement (MGA), a unit cost is applied to this cost category. The units are the days spent working on the action (rounded up to the nearest half-day) and the amount per unit (daily rate) is calculated according to the following formula:
(EUR 5 080 / 18 days = EUR 282,22 per day) multiplied by (country-specific correction coefficient of the country where the beneficiary is established)
Note that the country specific correction coefficient to use is the one applied for the Marie Skłodowska-Curie Actions (MSCA). Yearly rates are published in the Horizon Europe Work Programme – Marie Skłodowska-Curie Actions under the funding and tender portal Reference Documents (work programme and call documents section), available at <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON>.

For A.5 Volunteer Costs: a unit cost is also applied to this cost category. The units are the days spent working on the action (rounded up to the nearest half-day) and the amount per unit (daily rate) is a country specific rate of the country where the beneficiary is established. Country specific rates to apply can be found in the LIFE MGA on pages 83 & 84.

| Participant Number/Short Name | Country | Number of person months (staff effort per beneficiary) | Average monthly salary rate | A1. Employees (or equivalent); A2. Natural persons under direct contract and A3. Seconded Persons (costs) | A.4 SME owners and natural person (sole trader) beneficiaries (Unit costs in €) | Subtotal personnel costs without volunteers (A1+A2+A3+A4) - must be the same as in part A section 3 | A.5 Volunteers (Unit costs) must be the same as in part A section 3 | Total Personnel costs |
|---|---------|--|-----------------------------|---|---|---|---|-----------------------|
| 1. ADBPO | Italy | 299 | 6,998 € | 2,093,000 € | | 2,093,000 € | | 2,093,000 € |
| 2. AIPO | Italy | 72 | 3,518 € | 254,720 € | | 254,720 € | | 254,720 € |
| 3. ARPAAE | Italy | 115 | 5,612 € | 643,110 € | | 643,110 € | | 643,110 € |
| 4. ARPAP | Italy | 158 | 3,467 € | 548,463 € | | 548,463 € | | 548,463 € |
| 5. UNIBO | Italy | 286 | 3,977 € | 1,135,966 € | | 1,135,966 € | | 1,135,966 € |
| 6. ANBI | Italy | 29 | 5,946 € | 173,610 € | | 173,610 € | | 173,610 € |
| 7. CMCC | Italy | 174 | 6,739 € | 1,169,869 € | | 1,169,869 € | | 1,169,869 € |
| 8. CMBO | Italy | 118 | 3,518 € | 416,480 € | | 416,480 € | | 416,480 € |
| 9. ERSAF | Italy | 127 | 4,621 € | 585,900 € | | 585,900 € | | 585,900 € |
| 10. LEGAMBIENTE | Italy | 167 | 2,999 € | 501,123 € | | 501,123 € | | 501,123 € |
| 11. Legambiente Lombardia (PA) | Italy | 48 | 2,999 € | 142,769 € | | 142,769 € | | 142,769 € |
| 12. Legambiente Veneto (PA) | Italy | 48 | 2,999 € | 142,769 € | | 142,769 € | | 142,769 € |
| 13. Legambiente Piemonte e Valle d'Aosta (PA) | Italy | 48 | 2,999 € | 142,769 € | | 142,769 € | | 142,769 € |
| 14. Legambiente Emilia-Romagna (PA) | Italy | 48 | 2,999 € | 142,769 € | | 142,769 € | | 142,769 € |
| 15. POLITO | Italy | 290 | 4,796 € | 1,389,314 € | | 1,389,314 € | | 1,389,314 € |
| 16. SMAT | Italy | 58 | 4,130 € | 238,688 € | | 238,688 € | | 238,688 € |
| 17. RER | Italy | 35 | 3,127 € | 109,766 € | | 109,766 € | | 109,766 € |
| 18. Rpiemonte | Italy | 45 | 6,341 € | 285,984 € | | 285,984 € | | 285,984 € |
| 19. Rlombardia | Italy | 48 | 5,309 € | 253,773 € | | 253,773 € | | 253,773 € |
| 20. SOGESCA | Italy | 54 | 10,793 € | 586,040 € | | 586,040 € | | 586,040 € |
| 21. ARPALO | Italy | 25 | 3,249 € | 80,260 € | | 80,260 € | | 80,260 € |
| 22. ANBI ER | Italy | 25 | 4,400 € | 107,800 € | | 107,800 € | | 107,800 € |
| 23. ANBI LO | Italy | 24 | 4,838 € | 114,180 € | | 114,180 € | | 114,180 € |

| | | | | | | | | |
|--------------|-------|--------------|---------|---------------------|------------|---------------------|------------|---------------------|
| 24. ANBI P | Italy | 19 | 5,065 € | 95,220 € | | 95,220 € | | 95,220 € |
| 25. ANBI VE | Italy | 24 | 4,629 € | 111,090 € | | 111,090 € | | 111,090 € |
| Total | | 2,381 | | 11,465,432 € | 0 € | 11,465,432 € | 0 € | 11,465,432 € |

Subcontracting

Give details on subcontracted action tasks (if any) and explain the reasons why (as opposed to direct implementation by the participants).

Subcontracting — Subcontracting means the implementation of action tasks, i.e. specific tasks which are part of the action and are described in Annex 1 of the Grant Agreement.

Note: Subcontracting concerns the outsourcing of a part of the action to a party outside the Consortium. It is not simply about purchasing goods or services. We normally expect the participants to have sufficient operational capacity to implement the project activities themselves. Sub-contracting should therefore be exceptional.

Include only subcontracts that comply with the rules (i.e. best value for money and no conflict of interest; coordinator tasks can normally not be subcontracted).

| Participant Number/Short Name | Subcontract Description | Cost (€) | WP | Justification (Why is subcontracting necessary?) |
|-------------------------------|--|-----------|------|---|
| 1- ADBPO | Consultancy for data setting and specialist assistance for Multilevel Governance and Coordination of Funding | 20,000 € | 2 | The high number of information and facts also coming from different entities require an adequate approach in their collection so that they are available and usable. |
| 1- ADBPO | External assistance to take charge of regional models | 45,000 € | 5 | Part of the activities of the WPs, in particular evaluation of regional model cannot be carried out internally and require specialized external personnel. |
| 1- ADBPO | External technical support for WP6 "Nature and Ecosystem-based solution" | 110,000 € | 6 | Given the complexity of the project, contact persons/coordinators with specific skills have been identified for each type of activity/topic. For the topics handled in WP 6 it was not possible to identify this figure, despite the important competence of the partners. |
| 2 - AIPO | Technical support to the three level of legally mandatory planning and project design (1. technical-economical feasibility; 2. final planning; 3. executive planning) of the measures foreseen for the "Wild Lambro" and for the hydraulic modelling for the "Wild Lambro" task in WP6 | 300,000 € | T6.3 | The sedimentological and geomorphological analysis of a stretch of the Lambro including the intervention one, in order to evaluate the possible evolutionary scenarios (€ 50,000.00); 2D hydraulic study of the river section for the evaluation of the speed of the fluid threads, in the riverbed and on the floodplains (30.000, 00 €); general and particular communication on private subjects directly involved in the transformation of areas, with a critical analysis of the legislation on the acquisition of private property (expropriation) vs collaborative compensation for damage to productive farms (€ 70,000.00); study of the territorial area, with the principles of Biological-integrated Landscape Ecology to evaluate the landscape-ecological validity of the intervention also in reference to the EU green transformation objectives (€ 70,000.00) reporting to the EC of the budget assigned by an expert company (€ 50,000.00); the planning and project management of the intervention (€ 30,000.00). |
| 3 - Arpae | External expert for climatological applications | 145,000 € | 3 | Part of the activities of the WP3 cannot be carried out internally by Arpae and require specialized external personnel. Multi-year agreement with a university for the following support activities: - climatological data base and climate analysis; - study of climate change and its impact; - climate reports / guidelines. |
| 3 - Arpae | External expert for radar data processing | 180,000 € | 7 | Part of the activities related to the task 7.2 cannot be carried out internally by Arpae and require specialized external personnel. The external expert will be involved in the real-time estimation of precipitation amount based on combination of gauges, radar and microwave links. The contract should cover roughly 48 months at a monthly rate of 3500 € plus travel costs. |
| 3 - Arpae | IT assistance | 60,000 € | 7 | Part of the activities related to the management of the local task 7.2. cannot be carried out internally by Arpae and require specialized external personnel. |
| 3 - Arpae | External expert in marine and coastal processes and EWSs | 90,000 € | 7 | An external expert in marine and coastal processes and EWSs is essential to bring knowhow and support the development of the modelling and EWSs foreseen in the project and that is in charge of the marine and coastal forecasting Unit of Arpae-SIMC. |
| 3 - Arpae | Cooperation agreement among public bodies with CNR-ISMAR | 100,000 € | 7 | The cooperation agreement with CNR-ISMAR is of fundamental importance as they are the developers of the finite element model that Arpae-SIMC intends to use for the development of the modeling and warning systems in the project. |
| 3 - Arpae | Preventive and corrective maintenance service of hydrometeorological monitoring stations | 60,000 € | 7 | The preventive and corrective maintenance service of hydrometeorological monitoring stations is essential to ensure their functioning and operation. In fact, the stations provide the data necessary for identification and calculation of climatological indexes that otherwise could not be determined. |
| 3 - Arpae | Preventive and corrective maintenance service of marine-coastal monitoring stations | 200,000 € | 7 | The preventive and corrective maintenance service of maritime-coastal monitoring stations is essential to ensure their functioning and operation. In fact, the stations provide the data necessary for model validation and identification of weather-marine and coastal alert thresholds that otherwise could not be determined. It refers to the management of the observation stations essential for early warning activities in Emilia-Romagna. The network includes a wave buoy, two tide gauges and a network of 8 coastal webcams that monitor the state of the coast and allow the estimation of run up and changes in the shore line. |
| 4 - ARPA Piemonte | External expertise for updating climate scenarios on a local scale through the downscaling of model chains on a national scale | 57,320 € | 3 | Acquisition of climatic scenarios on a national scale and downscaling on a local scale. |

| | | | | |
|---|---|--------------------|----|---|
| 4 - ARPA Piemonte | External expertise for updating the climate assessment and risk factors | 51,000 € | 3 | Installation of meteorological and hydrological meteorological observational networks for updating the climate assessment. |
| 4 - ARPA Piemonte | External expertise for the preparation of scenarios for the future availability of water resources for the optimization of the regulation of alpine lakes | 40,000 € | 5 | Application of meteorological-hydrological models for the preparation of scenarios of future availability of water resources. |
| 4 - ARPA Piemonte | External expertise to improve high resolution precipitation estimation in urban areas | 68,000 € | 7 | Application of multisensor data fusion techniques for high resolution precipitation estimation. |
| 4 - ARPA Piemonte | External expertise for the development of large-scale irrigation efficiency indicators | 63,000 € | 8 | Integration of information from the ground and from remote sensing for the development of irrigation efficiency indicators. |
| 9 - ERSAF | Support for data collection, laboratory analysis, for useful indicators to define the LDN baseline at time t0 | 18,000 € | 4 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Expenses for training of technical facilitators and for the subsequent activity of facilitators on Conservation Agriculture and LDN for 5 years | 10,000 € | 4 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Expenses for facilitations activity on Conservation Agriculture for 5 years | 190,000 € | 4 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment and training of facilitators - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Scientific support for the identification of indicators and modeling applications | 61,000 € | 8 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Set up web gis tool LDN | 15,000 € | 8 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Expenses for facilitations activity on LDN for 5 years | 55,000 € | 8 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Support for data collection, laboratory analysis, for useful indicators to define the LDN at time t1 | 20,000 € | 9 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 9 - ERSAF | Assessment of spreading of AC techniques, of impact on irrigation water quantity and water quality of surface bodies, impact on soil and technical training on AC | 50,000 € | 9 | Support for participatory processes, data modelling, lab analysis data elaboration and mapping, impact assessment - requires specific expertise that ERSAF can not directly provide. |
| 10 - LEGAMB | 20 training courses for teachers | 40,000 € | 10 | Remuneration for the trainers who will carry out the training activities for the teachers. |
| 10 - LEGAMB | Communication Plan and visual identity for communication materials | 40,000 € | 10 | Assignment for a communication agency for the drafting of the plan and strategy, for the visual identity, for the graphic design and the preparation of all materials and communication tools and materials. |
| 15 - POLITO | Installation of piezometers + analyses of water samples | 121,600 € | 6 | The total amount of this budget (€121.600) is linked to two voices: 1) €64.000 to improve the monitoring net of groundwater with 16 piezometers (4000 €/piezometer x 4 piezometers/site x 4 measure sites) to monitoring and sampling underground waters in buffer zones; 2) €57.600 to do the chemical analysis of water samples (30 €/sample x 4 sample/piezometer/year x 16 piezometers x 3 years). The analysis will involve the determination of BOD5, COD, nitrogen pools (NO3-, NO2-, NH4+, TKN) and total phosphorus. |
| 15 - POLITO | Geomatic survey of covered channels and inflows from surrounding areas. | 30,000 € | 7 | These activities, necessary to obtain the geometric properties and hydraulic capacity of covered channels, require topographic/geomatic equipments and expertise which are not available in the units. |
| 15 - POLITO | LIDAR surveys of sediment monitoring sites and lake/reservoirs to be studied | 90,000 € | 5 | This activity requires a topographic/geomatic equipment and corresponding expertizes which are not available in the research units. |
| 18 - Rpiemonte | External expertise for a facilitator | 62,000 € | 2 | Regione Piemonte is preparing its own "Regional strategy on climate change". RP will work on strengthening the governance assets and political processes, fostering policy coherence, mainstreaming, vertical and horizontal integration of adaptation policies, disclosing climate related risk and incentivising solutions in climate-resilient development. In order to coordinate the strategies at the local level, a specific professional profile is required: the "facilitator". Such expertise is currently not available within the structures of RP. Facilitating participatory processes is a working methodology which has been already tested by RP at the local level within the framework of the "River Contracts" scheme. The implementation of such scheme requires technical knowledge in the management of complex decision-making processes in order to better organize meetings on the territory which are effective in promoting awareness about the short- and long-term consequences of climate change, in overcoming conflicts over water use and in sharing goals among technical, political and administrative staff, experts, stakeholders and citizens. The budget will be used to implement WP2, Task 2.2. |
| Total estimated costs | | 2,391,920 € | | |
| If subcontracting for the entire project goes beyond 30% of the total eligible costs, give specific reasons | | Insert text | | |

Other direct costs

Please complete the table below for each participant. If required add further tables at the end of this work sheet (one per participant).

Please ensure that the information provided is sufficient to assess the relevance of the costs in relation to the activities proposed. For major cost items add lines below, in order to provide a detailed breakdown within one cost category.

For major items listed in the justification column, indicate the work package / task to which they belong.

For equipment and infrastructure, please explain if the cost represents the full cost or the depreciation.

| | Cost (€) | Justification |
|------------------------------------|------------------|---|
| 1 - ADBPO | | |
| Travel & subsistence | 43,900 € | WP1 - project and steering committee meetings: 18 meetings x 1 pax x 350 (2days); WP2 - MGD meetings : 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 50 x 1pax x 200 (1 day); WP10-11 - Dissemination, exploitation and replication events: 30 x 1pax x 200 (1 day); WP11 - 3 national peer-to-peer exchange trips: 3 x 400€ x 3 pax; WP11 - 6 international peer-to-peer exchange trips: 6 x 800€ x 3 pax. |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 209,200 € | WP2 - WP4 - organisation of MGD, Stakeholders and Capacity Building meetings (logistics, catering, materials, speakers); WP1 - travel costs for External Advisory Board members - at least 1 face-to-face meeting: 5 pax x 800€; WP1 - organisation of 18 Project and Steering Committee meetings (catering, logistics, speakers) and €90,000: independent financial audit - at the end of each phase - to ensure quality financial management for the whole consortium; WP10 - information boards; WP11 - hosting of 3 peer-to-peer national visits (logistics, catering): 3 visits x 1.200€; WP11 - hosting of 6 peer-to-peer international visits (logistics, catering): 6 visits x 1.200€; WP11 - 3 national peer-to-peer exchange trips: 3 x 400€ x 3 pax; WP11 - 6 international peer-to-peer exchange trips: 6 x 800€ x 3 pax |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 253,100 € | |
| 2 - AIPo | | |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1 pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. Infrastructure) | 237,500 € | WP6 - purchase of databases (already on the market or built ad hoc), the databases will be used to store and manage all technical data related to the project. WP6 - task 6.3 - integration of the works lead by ERSAF (and Lombardia Region through complementary funding); main type of works: hydraulic reprofiling, eradication of allochthonous species and planting with suitable riparian vegetation, waste disposal, safety charges. The area object of the intervention concerns 6 km of Lambro River and in which, based on the funding granted, it is planned to perform at least 1 km of river restoration. |
| Other goods, works and services | 9,000 € | WP6 - organisation of technical stakeholder workshops. |
| Financial support to third parties | | WP6 - task 6.3 - integration of the works lead by ERSAF (and Lombardia Region through complementary funding); main type of works: hydraulic reprofiling, eradication of allochthonous species and planting with suitable riparian vegetation, waste disposal, safety charges. The area object of the intervention concerns 6 km of Lambro River and in which, based on the funding granted, it is planned to perform at least 1 km of river restoration. |
| Land purchase | | |
| Total | 258,400 € | |
| 3 - Arpae | | |
| Travel & subsistence | 29,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 40 x 1pax x 200 WP10-11 - Dissemination, exploitation and replication events: 20 x 1pax x 200 (1 day); WP3-7 - technical field trips for implementation actions: ca. 80 x 1pax x 150€. |
| Equipment (incl. infrastructure) | 20,000 € | WP7 - Disk storage system. 20000€: Nas storage system (Rack mounted) with disks for a minimum storage of 120 TB at least. |
| Other goods, works and services | 92,000 € | WP10 - Conference fees (4 conf. 2-4 persons/Conf); WP3 - 3courses on hydrological modeling, monitoring and prediction; Acquisition of CML data from telephone providers; WP10 - information boards; WP10 - communication and dissemination material. WP7 - computer renting |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 141,900 € | |
| 4 - ARPA Piemonte | | |
| Travel & subsistence | 27,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 40 x 1pax x 100; WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day); WP3-5-7-8 - technical field trips for implementation actions: ca. 80 x 1pax x 150€. |
| Equipment (incl. infrastructure) | 18,000 € | WP7 - X-band magnetron for rainfall estimations in the Torino urban area. Adaptation of precipitation estimation systems to the urban scale. |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 45,900 € | |
| 5 - UNIBO | | |
| Travel & subsistence | 40,100 € | WP7 - engineering tasks 12 travels x 2 persons + 1 night: 12*2*250 (150 accomodation + 100 travel); WP7 - clima team 10 travels x 2 persons + 1 night: 6*2*200 (150 accomodation + 50 travel); itoring travels, 2 x year, 18 travels x 2 persons + 1 night: 18*2*250 + socio-economic monitoring travels 10 travels *2 persons * 250; WP 10 festival organization and participation: 4 locations on the Po River, festival organization and support, 525*2 people*8 travels; WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | 12,000 € | WP7 - Coastal drift buoys in biodegradable material |
| Other goods, works and services | 90,800 € | WP10 - 1 publication WP7 related on clima and coast protection , 1 publication related to engineering (taks 7.2.); WP9 - consumables, analysis and small services; WP9 - monitoring report printing (climatic KPI); WP9 - publication (social impact), board, socio-economic report printing; WP 7 - activities in Task 7.2 will exploit the cloud-based climate service "SaferPlaces" (platform saferplaces.co, module Safer_RAIN) in close collaboration with the company Geosistema S.r.l. (VAT number IT 03236780403), which holds the exploitation rights of the service; the service will be used for generating high-resolution urban flooding scenarios supporting flood-risk planning and real-time management of urban pluvial flooding; WP10 - 10,000 eur per 4 small events along the Po River; WP10 - 1 publication related to communication activities, boards, posters and brochures for 4 events. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 142,900 € | |
| 6 - ANBI | | |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 41,500 € | WP10-11 - dissemination and Replication contents for ANBI members and final users; WP10 - information boards. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 53,400 € | |
| 7 - CMCC Foundation | | |
| Travel & subsistence | 46,900 € | WP3-5-6-7-8 - technical implemetation activities: ca. 50 x 2pax x 2day x 250; WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | 10,000 € | WP7 - cost effective tide gauge aquired to validate the model during the in situ field campain in the coastal area. Implementation of a fixed sealevel station Purchase of: - Electronic Components (Sensitive Elements and Management Electronics) 4000€ - Mechanical Components (Support Infrastructure) 3000€ - Zero level characterisation 1000€ - Miscellaneous consumables (cables, consumables) 2000€ |
| Other goods, works and services | 29,200 € | WP7 - Computer costs for performing coastal models simulations; WP7 - Consumable related to validation field campaigns; WP5-7 - Costs for Roundtabels and meeting organisation under WP 5 and 7. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 86,100 € | |
| 8 - CMBO | | |
| | | |

| | | |
|------------------------------------|------------------|---|
| Travel & subsistence | 20,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 40 x 2pax x 100; WP10-11 - dissemination, exploitation and replication events: 20 x 1pax x 200 ; WP7 - technical field trips for implementation actions: ca. 20 x 1pax x 150€. |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 18,000 € | WP4 - organisation of stakeholder workshops and capacity building events (logistics, catering, speakers); WP10 - information boards; WP10 - communication and dissemination material. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 38,900 € | |
| 9 - ERSAF | | |
| | Cost (€) | Justification |
| Travel & subsistence | 54,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 40 x 2pax x 150 (1 day); WP5-6-7-8 - technical field trips for data collection: ca. 50 x 1pax x 300€; WP5-6-7-8 - technical field trips for implementation actions: ca. 50 x 2pax x 100€; WP10-11 - dissemination, networking and replication event and meetings: ca. 20 x 2pax x 200€. |
| Equipment (incl. infrastructure) | 825,000 € | WP6.3 - "Lambro river floodplain area recreation, Realization of renaturalization of Lambro river banks for about 5 km. The task 6.3 "Lambro Selvaggio" aims to eliminate pre-existing and unjustified bank defences, restoring a fairly wide area where the river can evolve - even by moving significantly the meanders - and overflow. Ad hoc protection is guaranteed to risk elements where present (mainly farmhouses) and at the same time a considerable and as continuous as possible strip of riparian vegetation of native species will be created along the river, with the function of an ecological corridor. In detail the interventions include: - Restore a wide enough strip where the river can evolve even moving meanders significantly and overflowing, protecting ad hoc the elements at risk present. - Eliminate defences and restore morphological dynamics. - Defend the elements at risk from erosion and flooding (mainly farmhouses). - Recreating a substantial strip of riparian vegetation main type of works: hydraulic reprofiling, eradication of allochthonous species and planting with suitable riparian vegetation, waste disposal, safety charges". The first three years will concern: - preliminary assessment of the quality of the bank vegetation, of the ecosystem potential (25.000€) - start of definition of protocols for managing and contrasting the spread of invasive aliens (25.000€) - connection with AIPo in the preliminary definition of the needs of a new geomorphological structure (15.000€) - definition of the actor's map (5.000€) - Analysis of the Property Framework (5.000€) - planning and launching the stakeholder engagement process with particular attention to private owners (12.000€) - definition of the public-private agreement models functional to the future realization of the new floodplain areas (23.000€) - Shared evaluation of the different hypotheses of involvement / agreement with the frontists in the river restoration process (5.000€) From the 4th year to 6th year: infrastructures, plant management works, management and contrast of invasive aliens, and maintenance. □ The detail breakdown of the infrastructure works for years 4 to 6 remain to be provided, whenever they become available (before end of phase 1). |
| Other goods, works and services | 50,000 € | WP7-8-10 technical communication material; WP1-4-8-9 Co-design and stakeholders involvement, materials for dissemination of actions (e.g Video, multimedia, leaflets). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 929,900 € | |
| 10 - LEGAMB | | |
| | Cost (€) | Justification |
| Travel & subsistence | 17,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement and Capacity Building events: 40 x 1pax x 100; WP10-11 - Dissemination, exploitation and replication events: 20 x 1pax x 200. |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 245,800 € | WP10 - 20 notice board; WP10 - 20 rollup; WP10 - Comics; WP10 - Translation; WP10 - video laymans; WP10 - newsletters; WP10 - 3.500 ecogadget; WP10 - 10 video clip; WP10 - press conferences; WP10 - press kits; wp10 - 3 Educational tour; WP10 - social media advertising; WP10 - webpages design, updating and maintenance (linked to institutional partners websites); WP10 - dooh advertising; WP10 - podcast; WP10 - 5 Unconventional events. The individual voices for the total amount of €245,800 foreseen for WP1 are: 7.500 € for 20 notice board, 7.500 € for 20 rollup, 8.000 € for translation, 8.000 € for layman's report (video version), 10.800 € for newsletters (27 numbers), 30.000 € for 3.000 ecogadget, 20.000 € for 10 for video clip, 5.000 € for press conference, 5.000 € for 100 press kits, 21.000 € for 3 educational tour 25.000 € for social media advertising, 20.000 € for webpages design, updating and maintenance (linked to institutional partners websites), 30.000 € for digital out of home advertising campaign, 23.000 € for podcast, 25.000 € for 5 unconventional events. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 263,700 € | |
| 11 - LEGAMBLOMB | | |
| | Cost (€) | Justification |
| Travel & subsistence | 3,300 € | WP10 - travel and susistence for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 13,700 € | WP10 - consumables, services, catering, renting for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 17,000 € | |
| 12 - LEGAMBVENETO | | |
| | Cost (€) | Justification |
| Travel & subsistence | 3,300 € | WP10 - travel and susistence for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 13,700 € | WP10 - consumables, services, catering, renting for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 17,000 € | |
| 13 - LEGAMBPVDA | | |
| | Cost (€) | Justification |
| Travel & subsistence | 3,300 € | WP10 - travel and susistence for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 13,700 € | WP10 - consumables, services, catering, renting for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 17,000 € | |
| 14 - LEGAMBER | | |
| | Cost (€) | Justification |
| Travel & subsistence | 3,300 € | WP10 - travel and susistence for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 13,700 € | WP10 - consumables, services, catering, renting for 22 events (6 River Cafe, 5 Carovana del Po, 8 local administration meetings, 3 Big Jump). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 17,000 € | |
| 15 - POLITO | | |
| | Cost (€) | Justification |
| Travel & subsistence | 86,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day); WP5-6-7-8 - technical field trips for data collection: ca. 50 x 1pax x 300€; WP5-6-7-8 - technical field trips for implementation: ca. 100 x 2pax x 250€; WP10-11 - dissemination, networking and replication event and meetings: ca. 30 x 2pag x 250€. |
| Equipment (incl. infrastructure) | 112,500 € | a) 16000 € for 4 Automatic water samplers (WP6) b) 9000 € for 1 portable meter - TDR with battery charge and datalogger (WP5) c) 32000 € for 8 TCD sensors (temperature, conductivity and depth) (WP5) d) 55500 € for 8 turbidimeters (WP5) |
| Other goods, works and services | 40,000 € | WP10: 10.000 eur per 4 small events along the Po River. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 239,400 € | |
| 16 - SMAT | | |
| | Cost (€) | Justification |
| Travel & subsistence | 20,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement and Capacity Building events: 40 x 1pax x 100; WP10-11 - Dissemination, exploitation and replication events: 20 x 1pax x 200 ; WP7 - technical field trips for implementation actions: ca. 20 x 1pax x 150€. |

| | | |
|------------------------------------|------------------|--|
| Equipment (incl. infrastructure) | 25,000 € | WP7 - software licenses (e.g. Infoworks ICM, ICM Live). Purchase of an annual license (for the years required for the project) of modeling software for urban drainage systems. |
| Other goods, works and services | 7,000 € | WP7 - rainfall network maintenance costs; WP10 - information boards; WP10 - communication and dissemination material. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 52,900 € | |
| 17 - RER | | |
| | Cost (€) | Justification |
| Travel & subsistence | 15,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 10 x 1pax x 200; WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 18,000 € | WP4 - organisation of stakeholder workshops and capacity building events (logistics, catering, speakers); WP10 - information boards; WP10 - communication and dissemination material. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 33,900 € | |
| 18 - Rpiemonte | | |
| | Cost (€) | Justification |
| Travel & subsistence | 15,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 40 x 1pax x 100; WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 13,000 € | WP10 - information boards; WP10 - communication and dissemination material; WP2-4-10 - communication support materials (flyers, roll ups, brochures, etc.); WP2-4 - organization of meetings with local authorities and stakeholders (catering, logistics, materials, external speakers). |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 28,900 € | |
| 19 - RLombardia | | |
| | Cost (€) | Justification |
| Travel & subsistence | 15,900 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 40 x 1pax x 100; WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | 3,000 € | WP10 - information boards; WP10 - communication and dissemination material. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 18,900 € | |
| 20 - SOGESCA | | |
| | Cost (€) | Justification |
| Travel & subsistence | 26,400 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP4 - capacity building tasks 50 travels x 1pax x 250€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder engagement events: 10 x 1pax x 200 (1 day); WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | 24,000 € | WP4 - Carbon footprint calculation software licence + annual database updates. |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 50,400 € | |
| 21 - ARPALO | | |
| | Cost (€) | Justification |
| Travel & subsistence | 4,950 € | WP1 - project meetings: 18 meetings x 1pax x 350€; WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP10-11 - Dissemination, exploitation and replication events: 10 x 1pax x 200 (1 day). |
| Equipment (incl. infrastructure) | 80,000 € | 3 magnetron and spare part X band weather radar 6000 € 2 rain gauge/weather stations with radio and GPRS transmission 60000 € 1 weighing bucket rain gauge sensor 8000€ 6 heater for rain gage sensor 8000€ |
| Other goods, works and services | 24,000 € | WP3-4-5 - Meeting, Training courses, result publication. |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 108,950 € | |
| 22 - ANBI ER | | |
| | Cost (€) | Justification |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day) |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 11,900 € | |
| 23 - ANBI LOMBARDIA | | |
| | Cost (€) | Justification |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day) |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 11,900 € | |
| 24 - ANBI Piemonte | | |
| | Cost (€) | Justification |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day) |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 11,900 € | |
| 25 - ANBI VENETO | | |
| | Cost (€) | Justification |
| Travel & subsistence | 11,900 € | WP1 - project and steering committee meetings: 18 meetings x 1pax x 350 (2days); WP2 - MGD meetings: 18 x 1pax x 200 (1 day); WP4 - Stakeholder and Capacity Building events: 10 x 1pax x 200 (1 day) |
| Equipment (incl. infrastructure) | | |
| Other goods, works and services | | |
| Financial support to third parties | | |
| Land purchase | | |
| Total | 11,900 € | |

Proposal Info
 Associated with document Ref. Ares(2022)8672725 - 14/12/2022
Proposal ID

SEP-210835090

Call for Proposal

LIFE-2021-STRAT-two-stage

Topic

LIFE-2021-STRAT-CLIMA-SIP-two-stage

Type of Action

LIFE-PJG

LIFE Programme – Application Forms (Part C – KPI)

Horizontal KPIs for all LIFE applicants (Mandatory to report on all the KPIs of this section).

| | | |
|---|---|--|
| Innovation Is your project proposal developing, demonstrating and promoting innovative techniques and approaches? <input checked="" type="radio"/> Yes <input type="radio"/> No | Governance Is your project proposal improving governance through enhancing capacities of public and private actors and the involvement of civil society? <input checked="" type="radio"/> Yes <input type="radio"/> No | Plans & strategies Is your project proposal implementing key plans or strategies? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Catalytic effect - Financial Will your project trigger additional investments? <input checked="" type="radio"/> Yes <input type="radio"/> No | Catalytic effect - Spatial Will the results of your project be replicated beyond its intended geographical scope? <input checked="" type="radio"/> Yes <input type="radio"/> No | Catalytic effect - Thematic Will the results of your project be replicated (transferred) beyond its intended thematic scope? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Catalytic effect - Societal Will your project : a) Contribute to the development of new or existing national legislation, policies, regulations, incentives and voluntary commitments? b) Achieve a step-change in more effective compliance with and enforcement of Union environmental and climate legislation and/or in policy implementation? c) Achieve a step-change in awareness and support of environmental and climate matters? d) Establish a new macroregional or national model of cooperation (networking)? <input checked="" type="radio"/> Yes <input type="radio"/> No | Rio markers for climate, biodiversity and air quality Please indicate if your proposal: <ul style="list-style-type: none"> • Has climate change/ biodiversity/ air quality as their primary objective • Has climate change/ biodiversity/ air quality as their secondary objective and provide substantial contributions to these objectives • Does not contribute significantly to climate change/ biodiversity/ air quality Climate change Primary Objective Biodiversity Secondary Objective Air quality Secondary Objective | |

LIFE Programme - Context selection

| |
|---|
| <p>Please select the EU Member State(s) or/and Associated Countries (if any) or/and potential Associated Countries (if any) that best describe the geographical context of your project proposal, i.e. the area(s) of work or/and area(s) of impact.</p> <p>Please select the type of country you wish to add</p> <input checked="" type="radio"/> EU Member States |
|---|

- Associated Countries
- To Be Associated Countries

Italy(IT)

LIFE Programme - Annex II - Section 2 - Specific KPIs - (Please report on KPIs you consider relevant).

Please select the relevant indicators for your project. For each selected indicator please provide any required values and comments. Please note that if you deselect an indicator, all values entered will be lost.

- | | | |
|---|--|---|
| <input type="checkbox"/> Air quality | <input type="checkbox"/> Biodiversity (Invasive Alien Species) | <input type="checkbox"/> Biodiversity (habitats) |
| <input type="checkbox"/> Biodiversity (number of Species) | <input type="checkbox"/> C2M projects | <input type="checkbox"/> Chemicals (environment) |
| <input type="checkbox"/> Chemicals (humans) | <input type="checkbox"/> Climate area vulnerability reduction | <input type="checkbox"/> Climate vulnerability (humans) |
| <input type="checkbox"/> Employment | <input type="checkbox"/> Energy savings | <input type="checkbox"/> GHG emissions |
| <input type="checkbox"/> GHG sequestration | <input type="checkbox"/> Investments and Financing | <input type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Other project specific KPIs | <input type="checkbox"/> Renewable energy | <input type="checkbox"/> Resource efficiency |
| <input type="checkbox"/> Soil quality | <input type="checkbox"/> Waste management | <input checked="" type="checkbox"/> Water efficiency |
| <input checked="" type="checkbox"/> Water quality | | |

Water efficiency

Reduction in new water supplied, due to appropriate water saving measures (e.g. through increasing water reuse and/or avoiding water losses) in m3 / year.

In the start-value please provide the baseline of the problem at the start of the project (e.g. amount of water supplied/used). In the end-value please provide the estimated amount of water supplied/used at project-end. The end-value is expected to be lower than the start-value, demonstrating a reduction of water supplied due to the project actions. Please also provide the estimated amount of water supplied/used, 3/5 years after the project-end to demonstrate if further reduction would be achieved. Please also provide relevant comments.

| Project-Start Value (Baseline) | Project-End Value | 3/5 years beyond Project-End Value | Unit |
|--------------------------------|-------------------|------------------------------------|---------|
| 20000000000 | 18000000000 | 17000000000 | m3/year |

Please provide stand-alone information to further clarify your input and briefly explain any assumptions/calculations. Please also ensure alignment with the main proposal text.

The baseline was defined starting from the estimates of the average annual flows derived in the Po river basin destined for civil, energy-intensive, agricultural and productive uses. This indicator is shown in the "Water Balance Plan" and is the result of a specific methodology for calculating ADBPO's liability. Although purely predictive, it represents the highest degree of monitoring currently used within the river basin district planning tools. The value of the average annual flows derived in the Po river basin is equal to 20 billion m3 / year and about 60% is used exclusively in agriculture. The direct effect of the pilot actions included in WP8 and the ability to replicate them over time will be relevant to change this percentage. More generally, however, the project and complementary actions will allow both to improve the predictive model of the indicator over time and to reduce water consumption in each individual end use.

Water quality

Reduction in area or length of surface water bodies and groundwater bodies whose ecological status is affected (in the context of the Water Framework Directive).

In the start-value please provide the baseline of the problem at the start of the project (e.g. area or length of surface water bodies and groundwater bodies whose ecological status is affected by the pressure you aim to address). In the end-value please provide your estimated value of area/length affected at project-end. The end-value is expected to be lower than the start-value, demonstrating a reduction of the area or length of water bodies affected, due to the project actions. Please also provide the estimated area/length affected, 3/5 years after the project end to demonstrate if further reduction would be achieved. Please note that length units should be used for rivers. Please also provide relevant comments.

| Project-Start Value (Baseline) | Project-End Value | 3/5 years beyond Project-End Value | Unit |
|--------------------------------|-------------------|------------------------------------|------|
| 15370 | 12296 | 10759 | km |

Comments (Please provide stand-alone information to further clarify your input and briefly explain any assumptions/calculations. Please also ensure alignment with the main proposal text.)

From the reported graphic representation of the River Water bodies, it is possible to identify the highest levels of impairment of the ecological status in Lombardy, Piedmont, Emilia Romagna and Veneto, that is, in the most densely populated urban areas and / or in the vicinity of industrial production centers. The project actions of WP5 are concentrated on some of these areas, with a pilot approach that is therefore of interest also in terms of replicability over time. Conversely, both WP6 and the complementary funds act particularly on less urbanized, protected and / or highly developed areas of the primary sector (agriculture and livestock). For these reasons, at this stage, a reduction in the length of surface water bodies and groundwater bodies whose ecological status is affected is estimated (in the context of the Water Framework Directive).

Other project specific KPIs

Please enter your project's specific KPI title and provide clarifications in the comment box.

Please specify any other KPIs you wish to present that you consider relevant and not included in the existing KPI list.

| Project-Start Value (Baseline) | Project-End Value | 3/5 years beyond Project-End Value | Unit |
|--------------------------------|-------------------|------------------------------------|----------|
| 51 | 39 | 34 | pop./km2 |

Please provide stand-alone information to further clarify your input and briefly explain any assumptions/calculations. Please also ensure alignment with the main proposal text.

This indicator is an example of the approach used. Other specific indicators will be identified during the first nine months of the project (WP9) and made available at the end of the project. In this phase, it is deemed appropriate to report a single specific KPI relating to the flood hazard and the Health sector: "population density exposed to floods hazard in the whole regions' territories of the District". The reference baseline was developed starting from the "Mosaicatura nazionale ISPRA" (v. 5.0 - 2020, starting from the areas with hydraulic hazard with a return time between 20 and 200 years by ADBPO on the provisions of Legislative Decree 49/2010). A particular impact on this indicator is played by Emilia Romagna (with a weight of 24 inhabitants per Km2) where the project pilot actions are envisaged, particularly in WP7 invest. The complementary funds, WP4 and WP10 will allow to amplify the direct and indirect impacts on the identified indicator.

ANNEX 2

ESTIMATED BUDGET FOR THE ACTION

| Forms of funding | Estimated eligible ¹ costs (per budget category) | | | | | | | | | | Estimated EU contribution ² | | | | | |
|----------------------|---|---|----------------------|---|-------------------|-------------------|----------------------------|--------------------------|-------------------------------------|--|--|-----------------------------------|--------------------------------------|---------------------------|-----------------------------------|---------------|
| | Direct costs | | | | | | | | | Indirect costs | Total costs | EU contribution to eligible costs | | | Maximum grant amount ⁶ | |
| | A. Personnel costs | | | B. Subcontracting costs | C. Purchase costs | | | D. Other cost categories | | E. Indirect costs ³ | | Funding rate % ⁴ | Maximum EU contribution ⁵ | Requested EU contribution | | |
| | A.1 Employees (or equivalent) | A.2 Natural persons under direct contract | A.3 Seconded persons | A.4 SME owners and natural person beneficiaries | A.5 Volunteers | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | D.2 Land purchase | E. Indirect costs | | | | |
| Actual costs | Unit costs ⁷ | Unit costs ⁷ | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Flat-rate costs ⁸ | f = a + b + c + d + e | U | g = f * U% | h | m |
| | a1 | a3 | a4 | b | c1 | c2 | c3 | d1a | d2 | | e = flat-rate * (a1 + a3 + b + c1 + c2 + c3 + d1a) | | | | | |
| 1 - ADBPO | 2 093 000.00 | 0.00 | 0.00 | 175 000.00 | 43 900.00 | 0.00 | 209 200.00 | 0.00 | 0.00 | 0.00 | 176 477.00 | 2 697 577.00 | 60 | 1 618 546.20 | 1 618 546.20 | 1 618 546.20 |
| 2 - AIPo | 254 720.00 | 0.00 | 0.00 | 300 000.00 | 11 900.00 | 237 500.00 | 9 000.00 | 0.00 | 0.00 | 0.00 | 56 918.40 | 870 038.40 | 60 | 522 023.04 | 522 023.04 | 522 023.04 |
| 3 - ARPAE | 643 110.00 | 0.00 | 0.00 | 835 000.00 | 29 900.00 | 20 000.00 | 92 000.00 | 0.00 | 0.00 | 0.00 | 113 400.70 | 1 733 410.70 | 60 | 1 040 046.42 | 1 040 046.42 | 1 040 046.42 |
| 4 - ARPAP | 548 463.00 | 0.00 | 0.00 | 279 320.00 | 27 900.00 | 18 000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 61 157.81 | 934 840.81 | 60 | 560 904.49 | 560 904.48 | 560 904.48 |
| 5 - UNIBO | 1 135 966.00 | 0.00 | 0.00 | 0.00 | 40 100.00 | 12 000.00 | 90 800.00 | 0.00 | 0.00 | 0.00 | 89 520.62 | 1 368 386.62 | 60 | 821 031.97 | 821 031.97 | 821 031.97 |
| 6 - ANBI | 173 610.00 | 0.00 | 0.00 | 0.00 | 11 900.00 | 0.00 | 41 500.00 | 0.00 | 0.00 | 0.00 | 15 890.70 | 242 900.70 | 60 | 145 740.42 | 145 740.42 | 145 740.42 |
| 7 - CMCC | 1 169 869.00 | 0.00 | 0.00 | 0.00 | 46 900.00 | 10 000.00 | 29 200.00 | 0.00 | 0.00 | 0.00 | 87 917.83 | 1 343 886.83 | 60 | 806 332.10 | 806 332.09 | 806 332.09 |
| 8 - CMBO | 416 480.00 | 0.00 | 0.00 | 0.00 | 20 900.00 | 0.00 | 18 000.00 | 0.00 | 0.00 | 0.00 | 31 876.60 | 487 256.60 | 60 | 292 353.96 | 292 353.96 | 292 353.96 |
| 9 - ERSAF | 585 900.00 | 0.00 | 0.00 | 419 000.00 | 54 900.00 | 825 000.00 | 50 000.00 | 0.00 | 0.00 | 0.00 | 135 436.00 | 2 070 236.00 | 60 | 1 242 141.60 | 1 242 141.60 | 1 242 141.60 |
| 10 - LEGAMBIENTE | 501 123.00 | 0.00 | 0.00 | 80 000.00 | 17 900.00 | 0.00 | 245 800.00 | 0.00 | 0.00 | 0.00 | 59 137.61 | 903 960.61 | 60 | 542 376.37 | 542 376.36 | 542 376.36 |
| 10.1 - Legamb Lomb | 142 769.00 | 0.00 | 0.00 | 0.00 | 3 300.00 | 0.00 | 13 700.00 | 0.00 | 0.00 | 0.00 | 11 183.83 | 170 952.83 | 60 | 102 571.70 | 102 571.69 | 102 571.69 |
| 10.2 - Legamb Veneto | 142 769.00 | 0.00 | 0.00 | 0.00 | 3 300.00 | 0.00 | 13 700.00 | 0.00 | 0.00 | 0.00 | 11 183.83 | 170 952.83 | 60 | 102 571.70 | 102 571.69 | 102 571.69 |
| 10.3 - LEGAMB PVDA | 142 769.00 | 0.00 | 0.00 | 0.00 | 3 300.00 | 0.00 | 13 700.00 | 0.00 | 0.00 | 0.00 | 11 183.83 | 170 952.83 | 60 | 102 571.70 | 102 571.69 | 102 571.69 |
| 10.4 - LEGAMB ER | 142 769.00 | 0.00 | 0.00 | 0.00 | 3 300.00 | 0.00 | 13 700.00 | 0.00 | 0.00 | 0.00 | 11 183.83 | 170 952.83 | 60 | 102 571.70 | 102 571.69 | 102 571.69 |
| 11 - POLITICO | 1 389 314.00 | 0.00 | 0.00 | 241 600.00 | 86 900.00 | 112 500.00 | 40 000.00 | 0.00 | 0.00 | 0.00 | 130 921.98 | 2 001 235.98 | 60 | 1 200 741.59 | 1 200 741.58 | 1 200 741.58 |
| 12 - SMAT | 238 688.00 | 0.00 | 0.00 | 0.00 | 20 900.00 | 25 000.00 | 7 000.00 | 0.00 | 0.00 | 0.00 | 20 411.16 | 311 999.16 | 60 | 187 199.50 | 187 199.49 | 187 199.49 |
| 13 - RER | 109 766.00 | 0.00 | 0.00 | 0.00 | 15 900.00 | 0.00 | 18 000.00 | 0.00 | 0.00 | 0.00 | 10 056.62 | 153 722.62 | 60 | 92 233.57 | 92 233.57 | 92 233.57 |
| 14 - RPiemonte | 285 984.00 | 0.00 | 0.00 | 62 000.00 | 15 900.00 | 0.00 | 13 000.00 | 0.00 | 0.00 | 0.00 | 26 381.88 | 403 265.88 | 60 | 241 959.53 | 241 959.52 | 241 959.52 |
| 15 - RLombardia | 253 773.00 | 0.00 | 0.00 | 0.00 | 15 900.00 | 0.00 | 3 000.00 | 0.00 | 0.00 | 0.00 | 19 087.11 | 291 760.11 | 60 | 175 056.07 | 175 056.06 | 175 056.06 |
| 16 - SOGESCA | 586 040.00 | 0.00 | 0.00 | 0.00 | 26 400.00 | 24 000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 44 550.80 | 680 990.80 | 60 | 408 594.48 | 408 594.48 | 408 594.48 |
| 17 - ARPA Lombardia | 80 260.00 | 0.00 | 0.00 | 0.00 | 4 950.00 | 80 000.00 | 24 000.00 | 0.00 | 0.00 | 0.00 | 13 244.70 | 202 454.70 | 60 | 121 472.82 | 121 472.82 | 121 472.82 |
| 18 - ANBI-ER | 107 800.00 | 0.00 | 0.00 | 0.00 | 11 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8 379.00 | 128 079.00 | 60 | 76 847.40 | 76 847.40 | 76 847.40 |
| 19 - ANBI Lombardia | 114 180.00 | 0.00 | 0.00 | 0.00 | 11 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8 825.60 | 134 905.60 | 60 | 80 943.36 | 80 943.36 | 80 943.36 |
| 20 - ANBI PIEMONTE | 95 220.00 | 0.00 | 0.00 | 0.00 | 11 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7 498.40 | 114 618.40 | 60 | 68 771.04 | 68 771.04 | 68 771.04 |
| 21 - ANBIVENETO | 111 090.00 | 0.00 | 0.00 | 0.00 | 11 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8 609.30 | 131 599.30 | 60 | 78 959.58 | 78 959.57 | 78 959.57 |
| Σ consortium | 11 465 432.00 | 0.00 | 0.00 | 2 391 920.00 | 553 850.00 | 1 364 000.00 | 945 300.00 | 0.00 | 0.00 | 0.00 | 1 170 435.14 | 17 890 937.14 | | 10 734 562.31 | 10 734 562.19 | 10 734 562.19 |

¹ See Article 6 for the eligibility conditions. All amounts must be expressed in EUR (see Article 21 for the conversion rules).² The consortium remains free to decide on a different internal distribution of the EU funding (via the consortium agreement; see Article 7).

³ Indirect costs already covered by an operating grant (received under any EU funding programme) are ineligible (see Article 6.3). Therefore, a beneficiary/affiliated entity that receives an operating grant during the action duration cannot declare indirect costs for the year(s)/reporting period(s) covered by the operating grant, unless they can demonstrate that the operating grant does not cover any costs of the action. This requires specific accounting tools. Please immediately contact us via the EU Funding & Tenders Portal for details.

⁴ See Data Sheet for the funding rate(s).

⁵ This is the theoretical amount of the EU contribution to costs, if the reimbursement rate is applied to all the budgeted costs. This theoretical amount is then capped by the 'maximum grant amount'.

⁶ The 'maximum grant amount' is the maximum grant amount decided by the EU. It normally corresponds to the requested grant, but may be lower.

⁷ See Annex 2a 'Additional information on the estimated budget' for the details (units, cost per unit).

⁸ See Data Sheet for the flat-rate.

ANNEX 2a

ADDITIONAL INFORMATION ON UNIT COSTS AND CONTRIBUTIONS

SME owners/natural person beneficiaries without salary (Decision C(2020) 7115¹)

Type: unit costs

Units: days spent working on the action (rounded up or down to the nearest half-day)

Amount per unit (daily rate): calculated according to the following formula:

{EUR 5 080 / 18 days = **282,22**}
 multiplied by
 {country-specific correction coefficient of the country where the beneficiary is established}

The country-specific correction coefficients used are those set out in the Horizon Europe Work Programme (section Marie Skłodowska-Curie actions) in force at the time of the call (see [Portal Reference Documents](#)).

Volunteers (Decision C(2019)2646²)

Type: unit costs

Units: days spent working on the action (rounded up or down to the nearest half-day)

Amount per unit (daily rate):

| Country | Daily rate in € |
|--|-----------------|
| Denmark, Ireland, Luxembourg, Netherlands, Austria, Sweden, Liechtenstein, Norway | 157 |
| Belgium, Germany, France, Italy, Finland, United Kingdom, Iceland | 131 |
| Czech Republic, Greece, Spain, Cyprus, Malta, Portugal, Slovenia | 78 |
| Bulgaria, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia | 47 |
| Australia, Canada, Hong King, Israel, Japan, Kuwait, Macao, New Zealand, Qatar, United Arab Emirates, United States of America, Switzerland. | 92 |
| Albania, Angola, Antigua and Barbuda, Argentina, Barbados, Bosnia and Herzegovina, Brazil, Chile, Colombia, Comoros, Cook Islands, Dominica, Gabon, Grenada, Ivory Coast, Former Yugoslav Republic of Macedonia, Kosovo, Lebanon, Libya, Mexico, Montenegro, Nigeria, Peru, Saint Kitts And Nevis, Saint Lucia, Saint Vincent And the Grenadines, Sao Tome and Principe, Serbia, Seychelles, Thailand, Turkey, Ukraine, Uruguay, Venezuela, Zambia, Zimbabwe | 45 |
| Afghanistan, Azerbaijan, Bahamas, Bolivia, Burkina Faso, Cameroon, China, Congo, Costa Rica, Djibouti, Dominican Republic, Ecuador, El | 32 |

¹ Commission [Decision](#) of 20 October 2020 authorising the use of unit costs for the personnel costs of the owners of small and medium-sized enterprises and beneficiaries that are natural persons not receiving a salary for the work carried out by themselves under an action or work programme (C(2020)7715).

² Commission [Decision](#) of 10 April 2019 authorising the use of unit costs for declaring personnel costs for the work carried out by volunteers under an action or a work programme (C(2019)2646).

| | |
|---|-----------|
| <p>Salvador, Georgia, Guatemala, Guinea-Bissau, Haiti, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Micronesia, Morocco, Mozambique, Namibia, Palestine, Panama, Papua New Guinea, Paraguay, Senegal, South Africa, Surinam, Swaziland, Russia, Trinidad and Tobago, Vanuatu</p> | |
| <p>Algeria, Armenia, Bangladesh, Belarus, Belize, Benin, Bhutan, Botswana, Myanmar, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Congo – Democratic Republic of the-, Cuba, Korea (DPR), Egypt, Eritrea, Ethiopia, Equatorial Guinea, Fiji Island, Gambia, Ghana, Guinea, Guyana, Honduras, India, Indonesia, Kiribati, Kyrgyzstan, Laos, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Moldova, Mongolia, Nauru, Nepal, Nicaragua, Niger, Niue, Pakistan, Palau, Philippines, Rwanda, Samoa, Sierra Leone, Solomon, Somalia, South Sudan, Sri Lanka, Sudan, Syria, Tajikistan, Tanzania, Timor-Leste – Democratic Republic of, Togo, Tonga, Tunisia, Turkmenistan, Tuvalu, Uganda, Uzbekistan, Vietnam, Yemen</p> | <p>17</p> |

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AGENZIA INTERREGIONALE PER IL FIUME PO (AIPo), PIC 941034055, established in VIA GIUSEPPE GARIBALDI 75, Parma 43100, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AGENZIA REGIONALE PER LA PREVENZIONE, L'AMBIENTE E L'ENERGIA DELL'EMILIA-ROMAGNA (ARPAE), PIC 999454633, established in VIA PO 5, BOLOGNA 40139, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE (ARPAP), PIC 999468892, established in VIA PIO VII 9, TORINO (TURIN) 10135, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA (UNIBO), PIC 999993953,
established in VIA ZAMBONI 33, BOLOGNA 40126, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ASSOCIAZIONE NAZIONALE DELLE BONIFICHE, DELLE IRRIGAZIONI E DEI MIGLIORAMENTI FONDIARI (ANBI), PIC 884896081, established in VIA DI SANTA TERESA 23, ROMA 00198, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

FONDAZIONE CENTRO EURO-MEDITERRANEOSUI CAMBIAMENTI CLIMATICI (CMCC), PIC 999419422, established in VIA MARCO BIAGI 5, LECCE 73100, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

CITTA METROPOLITANA DI BOLOGNA (CMBO), PIC 933452729, established in VIA ZAMBONI 13, BOLOGNA 40126, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO (‘the Agreement’)

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ENTE REGIONALE PER I SERVIZI ALL' AGRICOLTURA E ALLE FORESTE (ERSAF),
PIC 899156245, established in VIA POLA 12, MILANO 20124, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

LEGAMBIENTE ASSOCIAZIONE ONLUS (LEGAMBIENTE), PIC 986523951, established in VIA SALARIA 403, ROMA 00199, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

POLITECNICO DI TORINO (POLITO), PIC 999977754, established in CORSO DUCA DEGLI ABRUZZI 24, TORINO 10129, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

Società Metropolitana Acque Torino S.p.A. (SMAT), PIC 991745946, established in Corso XI Febbraio 14, Torino 10152, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

REGIONE EMILIA ROMAGNA (RER), PIC 999482375, established in VIALE ALDO MORO 52, BOLOGNA 40127, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

REGIONE PIEMONTE (RPiemonte), PIC 999476943, established in PIAZZA CASTELLO 165, TORINO 10122, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

REGIONE LOMBARDIA (RLombardia), PIC 999654065, established in PIAZZA CITTA DI LOMBARDIA 1, MILANO 20124, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO (‘the Agreement’)

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

SOGESCA s.r.l. (SOGESCA), PIC 984301778, established in Via Pitagora 11 a, RUBANO 35030, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE (ARPA) DELLA LOMBARDIA (ARPA Lombardia), PIC 954110431, established in VIA IPPOLITO ROSELLINI 17, MILANO 20124, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ANBI - EMILIA ROMAGNA (ANBI-ER), PIC 887507709, established in VIA ERNESTO MASI 8, BOLOGNA 40137, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIONE REGIONALE BONIFICHE IRRIGAZIONI E MIGLIORAMENTO FONDIARI PER LA LOMBARDIA (ANBI Lombardia), PIC 887622848, established in VIA PONCHIELLI 5, CREMONA 26100, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIONE REGIONALE BONIFICHE IRRIGAZIONI PIEMONTE (ANBI PIEMONTE), PIC 887727123, established in VIA NEGRONI 7, NOVARA 28100, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and** the **European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ASSOCIAZIONE REGIONALE DEI CONSORZI DI GESTIONE E TUTELA DEL TERRITORIO E ACQUE IRRIGUE (ANBIVENETO), PIC 887733428, established in CANNAREGIO 122, VENEZIA 30121, Italy,

hereby agrees

to become beneficiary

in Agreement No 101069928 — LIFE21-IPC-IT-LIFE CLIMAX PO ('the Agreement')

between AUTORITA DI BACINO DEL FIUME PO (ADBPO) **and the European Climate, Infrastructure and Environment Executive Agency (CINEA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 4 LIFE MGA — MULTI + MONO

FINANCIAL STATEMENT FOR [PARTICIPANT NAME] FOR REPORTING PERIOD [NUMBER]

| Eligible ¹ costs (per budget category) | | | | | | | | | | | EU contribution ² | | | | Revenues | |
|---|---|---|-------------------------|-------------------|----------------------------|---------------|-------------------------------------|--|--------------------------------|---|------------------------------|--------------------------------------|--------------------------------------|---------------------------|---------------------------------|--------------------------------|
| Direct costs | | | | | | | | | | Indirect costs | Total costs | EU contribution to eligible costs | | | Total requested EU contribution | Income generated by the action |
| A. Personnel costs | | | B. Subcontracting costs | C. Purchase costs | | | D. Other cost categories | | E. Indirect costs ² | Funding rate % ³ | | Maximum EU contribution ⁴ | Requested EU contribution | | | |
| Forms of funding | A.1 Employees (or equivalent) | A.4 SME owners and natural person beneficiaries | A.5 Volunteers | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.X Financial support to third parties | D.2 Land purchase | E. Indirect costs | Total costs | Funding rate % ³ | Maximum EU contribution ⁴ | Requested EU contribution | Total requested EU contribution | Income generated by the action |
| | A.2 Natural persons under direct contract | A.3 Seconded persons | | | | | | | | E. Indirect costs | | | | | | |
| | Actual costs | Unit costs ⁵ | Unit costs ⁵ | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Actual costs | Flat-rate costs ⁶ | | | | | | |
| | a1 | a3 | a4 | b | c1 | c2 | c3 | d1a | d2 | e = flat-rate * (a1 + a3 + b + c1 + c2 + c3 + d1a) | f = a+b+c+d+e | U | g = f*U% | h | m | n |
| XX – [short name beneficiary/affiliated entity] | | | | | | | | | | | | | | | | |

The beneficiary/affiliated entity hereby confirms that:
 The information provided is complete, reliable and true.
 The costs and contributions declared are eligible (see Article 6).
 The costs and contributions can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 19, 20 and 25).
 For the last reporting period: that all the revenues have been declared (see Article 22).

① Please declare all eligible costs and contributions, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Only amounts that were declared in your individual financial statements can be taken into account lateron, in order to replace costs/contributions that are found to be ineligible.

¹ See Article 6 for the eligibility conditions. All amounts must be expressed in EUR (see Article 21 for the conversion rules).

² If you have also received an EU operating grant during this reporting period, you cannot claim indirect costs - unless you can demonstrate that the operating grant does not cover any costs of the action. This requires specific accounting tools. Please contact us immediately via the Funding & Tenders Portal for details.

³ See Data Sheet for the reimbursement rate(s).

⁴ This is the *theoretical* amount of EU contribution to costs that the system calculates automatically (by multiplying the reimbursement rates by the costs declared). The amount you request (in the column 'requested EU contribution') may be less.

⁵ See Annex 2a 'Additional information on the estimated budget' for the details (units, cost per unit).

⁶ See Data Sheet for the flat-rate.

ANNEX 5

SPECIFIC RULES

INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE (— ARTICLE 16)

Rights of use of the granting authority on results for information, communication, dissemination and publicity purposes

The granting authority also has the right to exploit non-sensitive results of the action for information, communication, dissemination and publicity purposes, using any of the following modes:

- **use for its own purposes** (in particular, making them available to persons working for the granting authority or any other EU service (including institutions, bodies, offices, agencies, etc.) or EU Member State institution or body; copying or reproducing them in whole or in part, in unlimited numbers; and communication through press information services)
- **distribution to the public** in hard copies, in electronic or digital format, on the internet including social networks, as a downloadable or non-downloadable file
- **editing** or **redrafting** (including shortening, summarising, changing, correcting, cutting, inserting elements (e.g. meta-data, legends or other graphic, visual, audio or text elements extracting parts (e.g. audio or video files), dividing into parts or use in a compilation
- **translation** (including inserting subtitles/dubbing) in all official languages of EU
- **storage** in paper, electronic or other form
- **archiving** in line with applicable document-management rules
- the right to authorise **third parties** to act on its behalf or sub-license to third parties, including if there is licensed background, any of the rights or modes of exploitation set out in this provision
- **processing**, analysing, aggregating the results and **producing derivative works**
- **disseminating** the results in widely accessible databases or indexes (such as through ‘open access’ or ‘open data’ portals or similar repositories, whether free of charge or not.

The beneficiaries must ensure these rights of use for the whole duration they are protected by industrial or intellectual property rights.

If results are subject to moral rights or third party rights (including intellectual property rights or rights of natural persons on their image and voice), the beneficiaries must ensure that they

comply with their obligations under this Agreement (in particular, by obtaining the necessary licences and authorisations from the rights holders concerned).

COMMUNICATION, DISSEMINATION AND VISIBILITY (— ARTICLE 17)

Communication and dissemination plan

The beneficiaries must provide a detailed communication and dissemination plan, setting out the objectives, key messaging, target audiences, communication channels, social media plan, planned budget and relevant indicators for monitoring and evaluation.

Additional communication and dissemination activities

The beneficiaries must engage in the following additional communication and dissemination activities:

- **present the project** (including project summary, coordinator contact details, list of participants, European flag and funding statement and special logo and project results) on the beneficiaries' **websites** or **social media accounts**
- for actions involving equipment, infrastructure or works, display as soon as the work on the action starts a **printed or electronic sign** of appropriate size, with European flag and funding statement and special logo
- upload the public **project results** to the LIFE Project Results platform, available through the Funding & Tenders Portal .

Special logos

Communication activities and infrastructure, equipment or major results funded by the grant must moreover display the following logo:

- the LIFE Programme logo



and

- for projects in Natura 2000 sites or contributing to the integrity of Natura 2000 network: the Natura 2000 logo



SPECIFIC RULES FOR CARRYING OUT THE ACTION (— ARTICLE 18)

Durability

Unless exempted by the granting authority, beneficiaries of Standard Action Projects, Strategic Nature Projects and Strategic Integrated Projects must commit to continue to use and maintain after the end of the action equipment bought and eligible at full costs, for activities pursuing the action's objectives. Such equipment must be used for these purposes — for at least five years after the end of the action (see Data Sheet, Point 1) or until the end of its economic lifespan (i.e. until it has been fully depreciated) — whichever is earlier.

Specific rules for blending operations

When implementing blending operations, the beneficiaries acknowledge and accept that:

- the grant depends on the approved financing from the Implementing Partner and/or public or private investors for the project
- they must inform the granting authority both about the approval for financing and the financial close — within 15 days
- the payment deadline for the first prefinancing is automatically suspended until the granting authority is informed about the approval for financing
- both actions will be managed and monitored in parallel and in close coordination with the Implementing Partner, in particular:
 - all information, data and documents (including the due diligence by the Implementing Partner and the signed agreement) may be exchanged and may be relied on for the management of the other action (if needed)
 - issues in one action may impact the other (e.g. suspension or termination in one action may lead to suspension also of the other action; termination of the grant will normally suspend and exit from further financing and vice versa, etc.)
- the granting authority may disclose confidential information also to the Implementing Partner.



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<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/faq>

N. proposta: PDEL-2022-154 del 14/12/2022

Centro di Responsabilità: Struttura Idro-Meteo-Clima

OGGETTO: Struttura Idro-Meteo-Clima. Adesione al Progetto LIFE-2021-STRAT-CLIMA-SIP-two-stage “CLIMate Adaptation for the PO river basin district - LIFE CLIMAX PO”.

PARERE CONTABILE

Il sottoscritto Dott. Giuseppe Bacchi Reggiani, Responsabile del Servizio Amministrazione, Bilancio e Controllo economico, esprime parere di regolarità contabile ai sensi del Regolamento Arpae per l'adozione degli atti di gestione delle risorse dell'Agenzia.

Data 16/12/2022

Il Dirigente
