

**ARPAE**

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

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**Atti amministrativi**

Determinazione dirigenziale	n. DET-2024-12 del 11/01/2024
Oggetto	Struttura Idro-Meteo-Clima. Approvazione dell'Accordo con il Consorzio Interuniversitario CINECA per il supporto all'esecuzione in qualità di subcontraente del progetto "Destination Earth" ECMWF/DESTINE/2022/DE_360 e successive modifiche.
Proposta	n. PDTD-2024-16 del 11/01/2024
Struttura adottante	Struttura Idro-Meteo-Clima
Dirigente adottante	Nanni Sandro
Struttura proponente	Struttura Idro-Meteo-Clima
Dirigente proponente	Dott. Nanni Sandro
Responsabile del procedimento	Alberoni Pier Paolo

Questo giorno 11 (undici) gennaio 2024 presso la sede di Viale Silvani, 6 in Bologna, il Responsabile della Struttura Idro-Meteo-Clima, Dott. Nanni Sandro, ai sensi del Regolamento Arpae per l'adozione degli atti di gestione delle risorse dell'Agenzia, approvato con D.D.G. n. 114 del 23/10/2020 e dell'art. 4, comma 2 del D.Lgs. 30 marzo 2001, n. 165 determina quanto segue.

**Oggetto: Struttura Idro-Meteo-Clima. Approvazione dell'Accordo con il Consorzio Interuniversitario CINECA per il supporto all'esecuzione in qualità di subcontraente del progetto "Destination Earth" ECMWF/DESTINE/2022/DE\_360.**

**RICHIAMATI:**

- l'art. 5 della L.R. 19 aprile 1995, n. 44 che, al comma 1 lettere a), q) r) e t ter) definisce le attività nell'ambito delle quali la Struttura Idro-Meteo-Clima di Arpa opera e, al comma 2, prevede che "Per l'adempimento delle proprie funzioni, attività e compiti, Arpa può definire accordi o convenzioni con Aziende ed Enti pubblici, operanti nei settori suolo, acque, aria, ambiente";
- l'art. 15 della L. 7 agosto 1990, n. 241, ai sensi del quale le Pubbliche Amministrazioni possono concludere tra loro accordi per disciplinare lo svolgimento in collaborazione di attività di interesse comune;
- la Legge Regionale 30 luglio 2015, n. 13 recante "Riforma del sistema di governo regionale e locale e disposizioni su Città Metropolitana di Bologna, Province, Comuni e loro Unioni" e ss.mm.ii., che all'art. 16, comma 1, prevede che l'ARPA dell'Emilia-Romagna sia ridenominata "Agenzia Regionale per la Prevenzione, l'Ambiente e l'Energia" (ARPAE);
- il Regolamento per l'adozione degli atti di gestione delle risorse dell'Agenzia approvato con D. D. G n. 114 del 23/10/2020;

**PREMESSO:**

- che tra il Centro Europeo per le previsioni meteorologiche a medio termine (ECMWF) e il CINECA è stato sottoscritto, nel mese di settembre 2022, l'Accordo ECMWF/DESTINE/2022/DE\_360 (di seguito "DE\_360"), agli atti, al fine di collaborare al progetto denominato "Destination Earth";
- che il progetto "Destination Earth" consiste nella creazione di un gemello digitale della Terra e prevede una tecnologia nativa del cloud che funzionerà in un ambiente HPC multisito, attingendo alle tecnologie specifiche del dominio e allo sviluppo software di ECMWF;

**CONSIDERATO:**

- che la Struttura Idro-Meteo-Clima conduce, da anni, attività operativa e di sviluppo nel campo della modellistica meteorologica previsionale ad area limitata sul territorio nazionale, gestendo varie catene previsionali basate sul modello COSMO e ora sul

modello ICON, realizzando prodotti a valenza nazionale resi al sistema dei Centri Funzionali;

- che nell'ambito delle attività del consorzio di modellistica COSMO è stato attivato un progetto, a cui partecipano Germania, Svizzera ed Italia, per la realizzazione di un digital twin per gli eventi meteorologici estremi denominato "Global to Regional Icon Digital Twin" con acronimo GLORI;
- che questo digital twin verrà implementato, per quanto riguarda l'Italia, sul sistema di supercalcolo Leonardo presso il CINECA;
- che CINECA ha proposto di estendere l'Accordo "DE\_360" già in corso con ECMWF, al fine di implementare e dimostrare l'interoperabilità tra Destination Earth Digital Twin Engine e l'implementazione GLORI basata sul modello ICON;
- che CINECA, in qualità di Lead Contractor, ha individuato come possibili subappaltatori per realizzare quanto richiesto le seguenti organizzazioni: CMCC, Arpa, ItaliaMeteo;
- che CINECA ed ECMWF hanno sottoscritto la modifica dell'Accordo in essere (di seguito "DE\_360\_AA2") il 28/11/2023, al fine di poter procedere all'attivazione dei subcontratti;

#### VERIFICATO:

- che, la Struttura è in grado di collaborare proficuamente per l'attuazione delle attività previste nel sopracitato Accordo "DE\_360\_AA2";
- che, per la realizzazione delle attività, si prevede che tutti i partner individuati firmino l'accordo "DE\_360\_AA2, al fine di gestire al meglio le attività previste nell'ambito del progetto;

#### CONSIDERATO:

- che le attività progettuali avranno decorrenza dalla data di sottoscrizione dell'Accordo con CINECA e fino al 30/04/2025, con un contributo complessivo a favore di Arpa pari a Euro 74.120,00;
- che la Struttura Idro-Meteo-Clima di Arpa è stata individuata come leader del Work Package 4 "Dimostrazione della compatibilità della piattaforma applicativa", con i seguenti obiettivi: i) analizzare l'implementazione di GLORI DT e il flusso di lavoro associato su Leonardo; ii) identificare la modularizzazione e l'adattamento necessari per interoperare con i componenti di DestinE DTE;
- che, in particolare, la Struttura contribuirà all'analisi e implementazione della compatibilità della piattaforma applicativa per il prototipo GLORI Digital Twin su Leonardo, per consentire l'esecuzione affiancata di IFS e GLORI sulla stessa piattaforma hardware;

-che i costi ammissibili al rimborso devono soddisfare le condizioni definite negli Accordi DE\_360 and DE\_360\_AA2 sottoscritti da CINECA e ECMWF, per un importo massimo pari a Euro 74.120,00 così articolati:

Costi di Personale (interno/esterno): Euro 69.120,00;

Trasferte: Euro 5.000,00;

- che, dal finanziamento per la partecipazione al progetto, deriverà per Arpae un'entrata pari a Euro 74.120,00;
- che tale contributo sarà utilizzato da Arpae nel rispetto delle norme contenute nei richiamati Accordi e i costi sostenuti saranno rendicontati, secondo le scadenze stabilite nei citati accordi tra CINECA e ECMWF;

#### RITENUTO:

- opportuno approvare l'Accordo di collaborazione con CINECA, che si allega sub A) al presente atto quale parte integrante e sostanziale;
- che la partecipazione al progetto rappresenti per Arpae un'opportunità per migliorare, attraverso il contatto e lo scambio di esperienze con altri centri internazionali e di ricerca, lo stato delle conoscenze sulla modellistica meteorologica ad altissima risoluzione e sulla possibilità di interoperare e confrontare diversi modelli Digital Twin;
- che, in particolare, la Struttura Idro-Meteo-Clima possa fornire competenze e risorse nell'ambito di tale progetto, che risulta di estremo interesse per l'Agenzia;
- di sottoscrivere, pertanto, l'Accordo di collaborazione suddetto, finalizzato a disciplinare la collaborazione tra i partner nell'ambito del progetto;

#### SU PROPOSTA:

- del Dott. Sandro Nanni, il quale ha espresso il proprio parere favorevole in ordine alla regolarità amministrativa del presente provvedimento;

#### DATO ATTO:

- che si è provveduto a nominare responsabile del procedimento il dott. Pier Paolo Alberoni;
- che è stato acquisito il parere favorevole di regolarità contabile espresso, ai sensi del Regolamento per l'adozione degli atti di gestione delle risorse dell'Agenzia approvato con D. D. G n. 114 del 23/10/2020, dalla referente amministrativa rag. Daniela Ranieri;

#### DETERMINA

1. di approvare l'Accordo con il Consorzio Interuniversitario CINECA per il supporto all'esecuzione in qualità di subcontraente del progetto "Destination Earth"

ECMWF/DESTINE/2022/DE\_360, che si allega sub A) al presente atto quale parte integrante e sostanziale;

2. di dare atto che l'Accordo di collaborazione avrà decorrenza dalla data della sua sottoscrizione e terminerà il 30/04/2025;
4. di dare atto che, per la realizzazione del progetto, potranno essere sostenuti da Arpae complessivamente costi per Euro 74.120,00 così articolati:  
Costi di Personale (interno/ esterno): Euro 69.120,00;  
Trasferte: Euro 5.000,00;
5. di dare atto che il costo complessivo stimato per la realizzazione delle attività previste nel progetto da parte di Arpae è pari ad Euro 74.120,00; tale importo è coperto interamente dal contributo di CINECA;
6. di individuare nei seguenti collaboratori le competenze e le professionalità necessarie alla partecipazione di Arpae al progetto:
  - Dott. Pier Paolo Alberoni, con funzione di coordinamento della partecipazione di Arpae al progetto;
  - Dott. Thomas Gastaldo, con funzioni di esperto di assimilazione nei modelli meteorologici;
  - Dott.ssa Virginia Poli, con funzioni di esperta nell'utilizzo delle informazioni radar nei modelli meteorologici;
  - Dott. Davide Cesari, con funzioni di esperto nella gestione delle procedure su sistemi di supercalcolo;
  - Dott. Enrico Minguzzi, con funzioni di esperto per la configurazione di modelli meteorologici ad alta risoluzione;
  - Dott.ssa Chiara Marsigli, con funzione di raccordo tra gli enti partecipanti al progetto GLORI;
  - Dott.ssa Maria Stefania Tesini, esperto in verifica della qualità dei modelli meteorologici;
  - Dott.ssa Giulia Caiani, con funzione di referente per la rendicontazione del progetto;
  - Rag.re Lucia Pirro e Luisella Iervolino, collaboratori amministrativi per la rendicontazione dei costi del progetto.

Allegato A) Accordo di collaborazione.

IL RESPONSABILE DELLA  
STRUTTURA IDRO-METEO-CLIMA  
(F.to Dott. Sandro Nanni)



## **Sub-Contract Agreement**

between CINECA and ARPAE  
for the “DE\_360\_AA2 - Technology Adoption for DestinE”

### **This sub-contract is between the following parties:**

Cineca Consorzio Interuniversitario (**CINECA**) with registered office Via Magnanelli 6/3, 40033 Casalecchio di Reno (Bologna), Italy (hereafter called “CINECA”); represented by Alessandra Poggiani, General Manager

### **Position: Lead Contractor**

and

ARPAE-SIMC with registered office in Viale Silvani 6, 40122 Bologna, Italy (hereafter called “ARPAE”); represented by Sandro Nanni, Head of Arpae-SIMC

### **Position: Sub-Contractor**

The Lead Contractor and the Sub-Contractor being referred to in this Sub-Contract Agreement individually as “Party” and together as “Parties”. By the application of an authorised signature, the Parties each show their intention and willingness to be bound by the terms of this Sub-Contract Agreement, with effect from the signature date

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## Introduction

### 1.1 Context

- 1.1.1 ECMWF has opened the Request for Proposal (RFP) DE\_360\_A1 to extend Agreement ECMWF/DESTINE/2022/DE\_360 (hereafter “DE\_360”) already ongoing with CINECA, in order to implement and demonstrate the interoperability between Destination Earth Digital Twin Engine and the GLORI implementation based on the ICON model.
- 1.1.2 CINECA has taken part in the tender DE\_360\_A1 as the Lead Contractor with the following Sub-Contractors: CMCC, ARPAE and ItaliaMeteo. As a result, CINECA and ECMWF have signed the Amendment Agreement No. 2 (hereafter “DE\_360\_AA2”) on 28/11/2023.
- 1.1.3 The Agreements DE\_360 and DE\_360\_AA2 gives ECMWF the option to require CINECA to supply ECMWF with the Services on the terms of such Agreement pursuant to the Service Contract which will be signed on behalf of the CINECA and ECMWF.
- 1.1.4 The current Sub-contract Agreement between CINECA and ARPAE is a sub-contract to the DE\_360\_AA2 signed between ECMWF and CINECA.
- 1.1.5 In the event of any conflict between the terms of this Sub-Contract Agreement and the terms of the Framework Agreement, the terms of the DE\_360 and the DE\_360\_AA2 shall prevail.

### 1.2 Applicable Documents

- 1.1.2 The Applicable documents comprise the following documents, listed in order of precedence, in case of conflict:
- 1.1.3 The Agreements DE\_360 and DE\_360\_AA2 between ECMWF and CINECA and related Appendices:
  - 1.1.3.1 CINECA Response to ECMWF’s Request for Proposal, including any clarifications which extend the rights or obligations of either party (“Appendix 1 – DE\_360\_CINECA Annex 2 Technical Proposal\_AA2” of the DE\_360\_AA2).
  - 1.1.3.2 The Pricing Tables and Deliverables List (“Appendix 2 – DE\_360\_CINECA Annex 2 Pricing Table and Deliverables List\_AA2”).
  - 1.1.3.3 The Financial Annex in relation to specific Services, including any clarifications which extend the rights or obligations of either party (“Appendix 3 – DE\_360\_CINECA Annex 3 Payment Plan\_AA2” of the DE\_360\_AA2).
  - 1.1.3.4 ECMWF’s Request for Services including any clarifications which extend the rights or obligations of either Party (“Appendix 4 – Request for Proposal Ref. RFP/2023/DE\_360\_A1” to the DE\_360\_AA2).
- 1.1.4 The present Sub-Contract Agreement.
- 1.1.5 For anything not expressly provided for in this contract applies, as far as compatible, Legislative Decree 36/2023 and the Italian civil code apply.

### 1.2 Purpose and Effect of the Sub-Contract Agreement

- 1.1.1 The present Sub-Contract Agreement between CINECA and the Sub-Contractor defines the terms and the conditions to provide those services covered by the Agreements DE\_360 and DE\_360\_AA2 in which the Sub-Contractor has a role, as specified in the following Articles 1.3.2 and 1.3.3, with particular attention to all the obligations covered by the clauses referred to in Clause 2.9.5 of the Agreements DE\_360 and DE\_360\_AA2, that is 2.1.1 (Contractor’s Undertakings), 2.1.5 (Exclusion Situations and Restricted Persons), 2.1.4 (Conflict of Interest), 2.4.6 (Publicity), 2.7 (Confidentiality), 2.8 (Personal Data Protection), 3 (Assets and Intellectual Property Rights), 5.1 (Record-keeping), 5.2 (Audits).

- 1.1.2 The overall and specific technical description of the services and of the resources to be provided by the Sub-Contractor is described in the Agreements DE\_360 and DE\_360\_AA2 and related Appendices. In particular, **ARPAAE** is the leader of Work Package 4 “Demonstration of Application Platform Compatibility” which aims to achieve the following objectives: i) Analyse the GLORI DT implementation and associated workflow on Leonardo; ii) Identify the needed modularization and adaptation necessary to interoperate with components of the DestinE DTE.

**ARPAAE** is responsible to provide the services foreseen in the two tasks 36041 defined at page 35 of the Appendix 1 of DE\_360\_AA2 (“Appendix 1 – DE\_360\_CINECA Annex 2 Technical Proposal\_AA2”):

- Task 36041: Analysis and Implementation of the Application Platform Compatibility for the GLORI Digital Twin prototype on Leonardo, to allow running IFS and GLORI on the same hardware platform side by side.

in due time as established in DE\_360\_AA2 and related Appendices.

**ARPAAE** is responsible to produce the outcomes of the deliverable listed at page 36 of the Appendix 1 of DE\_360\_AA2:

- D360.4.1.1: Analysis of a Proof of Concept (PoC) of the Application Platform Compatibility with the setup of the regional focus GLORI DT prototype and the co-design of DTE compatible interfaces targeting a focused national twin co-development framework. (Report, 30/04/2024, Arpae)
- D360.4.1.2: Implementation of a PoC of the Application Platform Compatibility with the setup of the regional focus GLORI DT prototype and the co-design of DTE compatible interfaces targeting a focused national twin co-development framework. (Software, 30/04/2025, Arpae)

in due time as established in DE\_360\_AA2 and related Appendices.

- 1.1.3 The governance of the project, including the acceptance procedures for the deliverables, are described in the Agreements DE\_360 and DE\_360\_AA2 and related Appendices.

### 1.3 Sub-contract – Purpose and Process

- 1.3.2 This Sub-Contract Agreement governs the overall relationship of the Parties in relation to the Services and sets out the procedure for CINECA to request the provision of the Services from the Sub-Contractor to execute Agreements DE\_360 and DE\_360\_AA2 signed by CINECA and ECMWF.

- 1.3.3 The terms of this Agreement shall be deemed incorporated into the above contracts.

- 1.3.4 All amendments and revisions issued by the ECMWF shall be provided to the Sub-Contractor by the CINECA for acceptance and shall be integrated as an amendment of this Sub-Contract Agreement, and thus through a written agreement between the Contractor and the Sub-Contractor.

- 1.3.5 The Price referred to in Article 2.1 includes all charges for the services and the resources to be provided by the Sub-Contractor, there are no additional costs.

### 1.4 Reporting

- 1.4.2 Financial, Annual and Semestral Reports

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- 1.4.2.1 The Subcontractor shall provide all necessary information on its preliminary financial information and its consolidated financial report for the previous year to enable CINECA to deliver the Financial Report to ECMWF in due time as established in Agreements DE\_360 and DE\_360\_AA2 and related Appendices.
  - 1.4.2.2 The Subcontractor shall provide all information necessary to complete the Annual Implementation Report and allow CINECA to deliver it to ECMWF in due time as established in Agreements DE\_360 and DE\_360\_AA2 and related Appendices.
  - 1.4.2.3 The Subcontractor shall provide all information necessary to complete the Semestral Implementation Report and allow CINECA to deliver it to ECMWF in due time as established in Agreements DE\_360 and DE\_360\_AA2 and related Appendices.
  - 1.4.3 CINECA may request additional information related to the implementation and financial reports. The Sub-Contractor shall make reasonable efforts to supply the requested information within seven (7) calendar days of the request.
  - 1.4.4 If the Sub-Contractor fails to submit the documents referred to in Articles 1.5 or the requested information by the set deadline or if the submitted new documents are not properly revised, CINECA reserves the right to suspend payments in accordance with Article 3.2 (Suspension of Payments). If any additional information or documents are requested under this Article 1.5, the time limit for scrutiny shall be suspended and shall resume once the information or documents concerned have been received by CINECA. Approval of the report shall not imply recognition of the legality and regularity of the underlying costs or of the authenticity, completeness and correctness of the declaration and information they contain.
  - 1.4.5 In the case ECMWF requires additional information or ad-hoc reporting as described in Agreements DE\_360 and DE\_360\_AA2 and related Appendices, the Sub-Contractor shall make reasonable efforts to supply to ECMWF – through the Lead Contractor CINECA.
  - 1.4.6 Final Implementation Report
    - 1.4.6.1 The Sub-Contractor shall submit to CINECA, as soon as possible and at the latest thirty (30) calendar days after termination or expiry of the Service Contract, a final report (the “Final Implementation Report”), as described in Agreements DE\_360 and DE\_360\_AA2 and related Appendices.
    - 1.4.6.2 The Sub-Contractor shall supply any information requested by CINECA in relation to the Final Implementation Report within seven (7) working days of receiving a request.
  - 1.4.7 Annual Work Plan
    - 1.4.7.1 During each year of this Service Contract, except for the last year, the sub-contractor shall submit its contribution to the Annual Work Plan for provision of the Services over the period of the next year (on the assumption that it will continue providing the Services during the following year), in due time as established in Agreements DE\_360 and DE\_360\_AA2 and related Appendices.
  - 1.4.8 In the case of an unforeseen event or the impossibility of fulfilling the specified deadlines for a justifiable reason, the Sub-contractor shall inform CINECA with no delay and a new delivery date can be agreed between the parties, always that CINECA’s delivery date to ECMWF is not compromised.
- 1.5 Service Change
- 1.5.2 If CINECA receives a Change Request from ECMWF as described in clause 2.5.1 of the Agreements DE\_360 and DE\_360\_AA2, the Parties to the present Sub-Contract Agreement will cooperate in defining a quotation according to the procedure outlined in clause 2.5.2 of the Agreements DE\_360 and DE\_360\_AA2.
  - 1.5.3 If the quotation is accepted by ECMWF, the present Sub-Contract Agreement will be amended accordingly.

## 1.6 Sub-contracting

- 1.6.2 No sub-contracts to the present Sub-Contract Agreement are foreseen. If necessary, the provisions of art. 2.9 of the Agreements DE\_360 and DE\_360\_AA2 apply.
- 1.6.3 The Sub-Contractor accepts that if it appears to ECMWF that the Services are being disrupted by the acts or omissions of the Sub-Contractor or that its qualifications or resources are no longer satisfactory or that its work does not conform to Good Industry Practice, ECMWF shall have the right to make a reasoned request for its replacement as soon as possible. In such case, the present Sub-Contract Agreement will be terminated.
- 1.6.4 The Sub-Contractor accepts and is effectively required to meet the same obligations as CINECA is required to meet under the following Clauses of the Agreements DE\_360 and DE\_360\_AA2: 2.1.1 (Sub-Contractor's Undertakings), 2.1.4 (Exclusion Situations and Restricted Persons), 2.3.6 (Conflict of Interest), 2.4.6 (Publicity), 2.7 (Confidentiality), 2.8 (Personal Data Protection), 2.9 (Sub-contracting), 3 (Assets and Intellectual Property Rights), 4.6 (VAT and other Taxes), 5.1 (Audits) and (on a mutatis mutandis basis) 5.8.1 and 5.10.3 (Liabilities towards third parties).

## Section 2 Finance

### 1.1 Price

- 1.1.1 The Price for the Services of ARPAE is set out in this Service Contract. CINECA shall pay – upon approval by & payment from the ECMWF - the Price subject to the terms of this Sub-Contract Agreement in the Payment Plan in the Service Contract attached to the present Sub-Contract Agreement.
- 1.1.2 L. 136/2010 shall apply as far as is compatible.

### 1.2 Invoicing

- 1.2.1 Invoices can be raised at the end of each of the payment phases set out this Service Contract.
- 1.2.2 The electronic form of all invoices must be sent to CINECA PEC address:  
cineca@pec.cineca.it  
and via the SDI system with header:  
CINECA INTERUNIVERSITY CONSORTIUM  
VIA MAGNANELLI 6/3  
40033 CASALECCHIO DI RENO  
Codice Fiscale 00317740371  
Partita IVA 00502591209  
Invoices should report the following details:
- Subject: Sub-Contract Agreement between CINECA and ARPAE for the "DE\_360\_AA2 - Technology Adoption for DestinE"
  - Payment Milestone number (as indicated in the Service Contract)
  - Subcontractor VAT number
- 2.1.2 To issue the invoice, the Sub-Contractor shall be authorised by CINECA in writing. CINECA shall authorize the emission of the invoice within ten (10) from the reception of the corresponding payment from ECMWF for the same payment phase.
- 2.1.3 All invoices must be accompanied by a copy of the relevant authorization by CINECA (see Article 2.2.3) and a report with an overall indication of the Person Months (PMs) spent by

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the Subcontractor's team during the payment period, and the travel and other costs spent by Sub-Contractor during the period.

- 2.1.4 The amount of each invoice shall be computed in accordance with the principles set out in this Service Contract, which amounts are exclusive of any applicable VAT.

## 2.2 Payment

- 2.2.2 CINECA will pay within 30 days after receipt of the invoice by Sub-Contractor.

- 2.2.3 If ECMWF disputes the whole or any portion of an invoice raised under the Agreements DE\_360 and DE\_360\_AA2, the corresponding portion of the Sub-Contractor's invoice shall not be authorised by CINECA and CINECA will notify the Sub-Contractor of the amount in dispute and the nature of the dispute.

- 2.2.4 Depending on the resolution of the Dispute between ECMWF and CINECA, the Sub-Contractor will issue an invoice that meets the requirements of Article 2.2 in the resulting amount or in the amount determined under the Dispute Resolution Procedure to be payable as described in the Agreements DE\_360 and DE\_360\_AA2 and relates Appendices.

## 2.3 Banking Arrangements

- 2.3.2 Payments shall be made to the Sub-Contractor according to the Pagopa payment notice that Arpae will send together with the invoice to the PEC/Mail address indicated by CINECA.

## Section 3 Governance

### 1.1 Record-keeping and Audits

- 1.1.1 The sub-contractor is responsible, as far as it is concerned, for maintaining all necessary documentation as required in clauses 5.1 (record keeping) and 5.2 (audits) of the DE\_360 agreement.
- 1.1.2 The Sub-Contractor acknowledges and accepts that ECMWF, CINECA and the European Commission shall each have the right from time to time and on reasonable notice to perform, either itself or through its representatives the audits, inspections and checks as described in Clause 5.2 of the DE\_360 agreement, for a period lasting service duration and up to 5 years after the end of it.
- 1.1.3 The Sub-Contractor shall, at its cost, provide CINECA, ECMWF and ECMWF's representatives with all reasonable assistance in order to enable them to initiate, carry out and complete any audit contemplated in this Article and in Clause 5.2 of the Agreement DE\_360.
- 1.1.4 If, as a result of ECMWF's exercise of its rights under Clause 5.2 (Audits) of the DE\_360 Agreement, it is found that Sub-Contractor has failed to perform its obligations under the current Sub-Contract Agreement or related Service Contract, CINECA may make these findings available to the Sub-Contractor and, in such a case, the Sub-Contractor shall respond promptly to the issues raised setting out actions it proposes to take with respect to the findings to remedy his failure.
- 1.1.5 If, as a result of ECMWF's exercise of its rights Clause 5.2 (Audits) of the DE\_360 Agreement, it is found that there has been an overpayment of the Price or any other charges for reasons which are dependent on the Sub-Contractor, and CINECA is required to reimburse and repay ECMWF as per clause 5.2.11 of the DE\_360 Agreement, the Sub-Contractor is required to reimburse and repay CINECA according to the prescriptions of such clause, in the proportion in which the failure detected by ECMWF is the Sub-Contractor's fault.
- 1.1.6 Any inspection or audit, or failure to inspect or audit, shall not in any way release the Sub-Contractor from its obligations under this Sub-Contract Agreement between the Sub-Contractor and CINECA.

1.1.7 The provisions of this Article 3.1 shall survive termination or expiry of this Sub-Contract Agreement for any reason until the end of the sixth (6th) CINECA financial year following the CINECA financial year in which this Sub-Contract Agreement terminates or expires.

### 3.1 Suspension of Payment

3.1.2 CINECA may, in accordance with the principle of proportionality, suspend payments in all or in part if the ECMWF has notified the suspension of payments to CINECA according to clause 5.4 of the DE\_360 Agreement, and the suspension is related to the Sub-Contractor's Services under the present Sub-Contract Agreement, in which case CINECA should promptly inform the Sub-Contractor. Possible reasons for ECMWF to suspend payments are reported in clause 5.4 of the DE\_360 Agreement.

3.1.3 CINECA may also, in accordance with the principle of proportionality, suspend payments in all or in part:

3.1.4 if it has substantiated evidence that the Sub-Contractor has committed Substantial Errors, irregularities or Fraud during the performance of the Services, or if the Sub-Contractor fails to comply with its obligations under this Sub-Contract Agreement;

3.1.5 if it has substantiated evidence that the Sub-Contractor has committed Systemic or Recurrent Errors, irregularities, Fraud or breach of obligations under this Sub-Contract Agreement which call into question the reliability of its internal control system or the legality and regularity of the underlying costs;

3.1.6 if it suspects Substantial Errors, irregularities, Fraud or breach of obligations committed by the Sub-Contractor during the performance of the Services and needs to check whether they have occurred.

3.1.7 Before suspension of a payment, the Parties will seek settlement according to the Dispute Resolution Procedure (clause 2.6 of the DE\_360 Agreement, as if the Subcontractor were the Contractor and the Contractor were the Funding Body).

## Section 4 Complements and Amendments to the Agreements DE\_360 and DE\_360\_AA2 and relates Appendices

### 4.1 Insurance requirements

4.1.2 The Sub-Contractor will cover at its own expenses the insurance costs resulting from its own compliance to the insurance requirements as detailed in the Agreements DE\_360 and DE\_360\_AA2 at the article 2.1.9 (as if the Subcontractor were the Contractor and the Contractor were the Funding Body).

### 4.2 Governing Law

4.2.2 Unless otherwise agreed in writing, Italian law shall govern the validity, construction and performance of this Sub-Contract Agreement and each Service Contract.

4.2.3 In the event of a dispute arising in connection with this Sub-contract Agreement and/or the Service Contract, the Parties shall comply with Clause 2.6 (Process for Resolving Disputes) of the DE\_360 Agreement (as if the Subcontractor were the Contractor and the Contractor were the Funding Body). If any dispute cannot be so settled, it shall be finally settled by the court of Bologna.

### 4.3 Indemnities and Limits of Liability

4.3.2 The Subcontractor shall indemnify the Contractor under Clause 5.9 of the DE\_360 Agreement as if the Subcontractor were the Contractor and the Contractor were the Funding Body.

Sub-Contract between CINECA and ARPAE  
for the "DE\_360\_AA2 - Technology Adoption for DestinE"

- 4.3.3 The Parties undertake to make no claim in connection with this Sub-Contract Agreement or its subject matter against any employees, students, agents, or appointees of the other Parties (apart from claims based on fraud or wilful misconduct). This undertaking is intended to give protection to individual researchers: it does not prejudice any right which a Party might have to claim against any other Party.
- 4.3.4 The Subcontractor's limit for its liabilities shall be as listed under Clause 5.9 and 5.10 of the DE\_360 Agreement as if the Subcontractor were the Contractor and the Contractor were the Funding Body. For the sake of clarity, the 'Overall price' referred under Clause 5.10 and applicable to the Sub-Contractor shall be the one indicated in the Payment Plan attached to the present Sub-Contract Agreement.

#### 4.4 Termination

- 4.4.2 Termination rules will follow the rules set in DE\_360 agreement article 5.6, as if the Subcontractor were the Contractor and the Contractor were the Funding Body.

#### 4.5 FORCE MAJEURE

- 4.5.2 No Party shall be in breach of this Sub-Contract Agreement nor liable for delay in performing, or failure to perform, any of its obligations under this Sub-Contract Agreement if such delay or failure result from events, circumstances or causes beyond its reasonable control (excluding an obligation to make payment).
- 4.5.3 In such circumstances the affected party shall be entitled to a reasonable extension of the time for performing such obligations. If the period of delay or non-performance continues for three (3) months or more, either Party may terminate this Sub-Contract Agreement with immediate effect by giving written notice to the other Party.
- 4.5.4 The affected Party shall use all reasonable endeavours to mitigate the effect of such events, circumstances or causes beyond its reasonable control.

Sub-Contract between CINECA and ARPAE  
for the "DE\_360\_AA2 - Technology Adoption for DestinE"

SIGNED for and on behalf of CINECA:

SIGNED for and on behalf of the Sub-Contractor:

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Signature

.....

Signature

Alessandra Poggiani

General Manager

Dr. Sandro Nanni

Head of Arpae-SIMC

Place and Date: Bologna, .....

Place and Date: Bologna

Although the clauses of this contract are the result of the negotiation of the Parties, the same declare, pursuant to and for the purposes of articles 1341 and 1342 codes. civ., to expressly approve the provisions contained in all section.



Sub-Contract between CINECA and ARPAE  
for the "DE\_360\_AA2 - Technology Adoption for DestinE"

SIGNED for and on behalf of CINECA:

SIGNED for and on behalf of the Sub-Contractor:

.....

Signature

Alessandra Poggiani  
General Manager

Place and Date: Bologna, .....

.....

Signature

Dr. Sandro Nanni  
Head of Arpae-SIMC

Place and Date: Bologna

## Service Contract

### 1.1. Interpretation

1.1.1. This Service Contract and Sub-Contract Agreement (the “Sub-Contract Agreement” or “Sub-Contract”) signed by Cineca Consorzio Interuniversitario (hereafter “CINECA”) and ARPAE (hereafter “the Sub-Contractor”).

1.1.2. Unless otherwise defined in this Service Contract, terms used in this Contract shall have the meaning given to them in the DE\_360 and DE\_360\_AA2 Agreements.

1.1.3. The terms of the DE\_360 and DE\_360\_AA2 Agreements are incorporated into and form part of this Service Contract, as varied and amended by the other provisions of this Service Contract.

### 1.2. Subject Matter and Timing

1.2.1. The Sub-Contractor undertakes, in accordance with the terms set out in the DE\_360 and DE\_360\_AA2 Agreements and in this Service Contract and the annexes thereto, which form an integral part thereof, to perform the Services assigned to the Subcontractor in “Appendix 1 – DE\_360\_CINECA Annex 2 Technical Proposal\_AA2” of DE\_360\_AA2 Agreement Annex 2 of DE\_360 and DE\_360\_AA2 Agreements (signed on 09/09/2022 and on 28/11/2023) in accordance with the timeframes set out in the Payment Plan.

### 1.3. Price

1.3.1. The Price for this Service Contract is calculated on a Pre-Agreed Price Basis

### 1.4. Software

1.4.1. The Agile Development terms in Annex 4 (Software) of the DE\_360 Agreement shall be incorporated into this Service Contract and the Contractor shall comply with such terms in connection with its development of all software developed under this Service Contract.

## Section 1 of the Service Contract - Payment Plan

The payment plan in the table below is agreed for the payments ("Payments") for the present Service Contract:

				Duration		Amount (EUR)
Sub-Contractor Overall Contract Budget (maximum)				18 months		74.120,00
Payment Milestone number	Period of activities / Milestone covered	Activities and Deliverables covered by payment Milestone	Full value of activities covered (EUR)	Payment amount (EUR)	Percentage	Cumulative budget (EUR)
DE_360_PM 2	Subcontract signature date - 30/04/2024	Deliverables + Travel D360.4.1.1	€14,720.00 (Payroll) + €2,500.00 (Travel)	17,220.00	23%	17,220.00
DE_360_PM 3	01/05/2024 - 30/04/2025	Deliverables + Travel D360.4.1.2	€54,400.00 (Payroll) + €2,500.00 (Travel)	56,900.00	77%	74.120,00
TOTAL			74.120,00	74.120,00	100%	

## Section 2 of the Service Contract – Invoicing

- 2.1 All invoices to CINECA must comply with the specifications in Article 2.2 of the Sub-contract Agreement.
- 2.2 The Sub-Contractor shall submit justification of the use of resources on an annual basis according to Article 1.5 (Financial, Annual and Semestral Reports) of the Sub-contract Agreement. Prices shall respect the eligibility criteria as specified in Clause 4.1 and 4.2 of the DE\_360 and DE\_360\_AA2 Agreements and the necessary evidence shall be provided by the Sub-Contractor for audit purposes.

SIGNED for and on behalf of CINECA:

SIGNED for and on behalf of the Sub-Contractor:

.....  
Signature

.....  
Signature

Alessandra Poggiani  
General Manager

Dr. Sandro Nanni  
Head of Arpae-SIMC

Place and Date: Bologna, .....

Place and Date: Bologna, .....

Although the clauses of this contract are the result of the negotiation of the Parties, the same declare, pursuant to and for the purposes of articles 1341 and 1342 codes. Civ., to expressly approve the provisions contained in the Payment Plan, Section 1 of this Service Contract.

Sub-Contract between CINECA and ARPAE  
for the "DE\_360\_AA2 - Technology Adoption for DestinE"

SIGNED for and on behalf of CINECA:

SIGNED for and on behalf of the Sub-Contractor:

.....

Signature

Alessandra Poggiani  
General Manager

Place and Date: Bologna, .....

.....

Signature

Dr. Sandro Nanni  
Head of Arpae-SIMC

Place and Date: Bologna .....

N. Proposta: PDTD-2024-16 del 11/01/2024

**Centro di Responsabilità: Struttura Idro-Meteo-Clima**

**OGGETTO: Struttura Idro-Meteo-Clima. Approvazione dell'Accordo con il Consorzio Interuniversitario CINECA per il supporto all'esecuzione in qualità di subcontraente del progetto "Destination Earth" ECMWF/DESTINE/2022/DE\_360 e successive modifiche.**

**PARERE CONTABILE**

Il/La sottoscritto/a Dott/Dott.ssa Ranieri Daniela, Responsabile Amministrativo/a di Struttura Idro-Meteo-Clima, esprime parere di regolarità contabile ai sensi del Regolamento Arpae per l'adozione degli atti di gestione delle risorse dell'Agenzia.

Data 11/01/2024

Il/La Responsabile Amministrativo/a

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