

# ARPA

## Atti amministrativi

|         |                                                                                                                                                                                                                                                                                                                                            |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oggetto | Sezione provinciale di Parma. Presa d'atto dell'approvazione del Progetto “An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions” (Life OPERA). Approvazione del Grant Agreement sottoscritto con la Commissione Europea per la realizzazione del Progetto. |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Struttura proponente Sezione di Parma

Dirigente proponente Dallara Giuseppe

Responsabile del procedimento de' Munari Eriberto

Questo giorno 25 (venticinque) ottobre 2010 (duemiladieci), presso la sede di Via Po n. 5, in Bologna, il Direttore Generale, Prof. Stefano Tibaldi, delibera quanto segue.

**Oggetto: Sezione provinciale di Parma. Presa d'atto dell'approvazione del Progetto “An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions” (Life OPERA). Approvazione del Grant Agreement sottoscritto con la Commissione Europea per la realizzazione del Progetto.**

**PREMESSO:**

- che, nell'ambito del Programma LIFE09 promosso dalla Commissione Europea, Arpa Emilia-Romagna ha presentato la proposta progettuale “An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions”, alla quale è stato attribuito il codice ENV/IT/000092;
- che tale proposta, denominata Life OPERA, è stata approvata ed ammessa a finanziamento dalla Commissione Europea, come da lettera della Direzione Generale Ambiente del 6/08/2010 acquisita agli atti;
- che Arpa Emilia-Romagna riveste il ruolo di beneficiario incaricato del coordinamento e pertanto unico soggetto responsabile nei confronti della Commissione Europea per la realizzazione del Progetto;
- che i soggetti beneficiari associati nel Progetto Life OPERA sono l'Università degli Studi di Brescia, TerrAria S.r.l. e il Centre National de la Recherche Scientifique (CNRS);

**PREMESSO INOLTRE:**

- che in data 27/08/2010 è stato sottoscritto dalla Commissione Europea e da Arpa Emilia-Romagna, in qualità di beneficiario incaricato del coordinamento, il Grant Agreement, allegato sub A) al presente atto quale parte integrante e sostanziale, finalizzato a disciplinare la realizzazione del Progetto Life OPERA;
- che il Progetto ha durata di 37 mesi a decorrere dall'1/09/2010 e pertanto fino al 30/09/2013;
- che il costo complessivo stimato per la realizzazione del Progetto Life OPERA è pari ad Euro 2.301.010,00, coperto fino all'importo massimo di Euro 1.089.544,00 dalla Commissione Europea e per il rimanente importo attraverso cofinanziamento dei soggetti beneficiari;
- che i prospetti riepilogativi del budget complessivo del Progetto, nonché dell'articolazione tra i soggetti beneficiari, sono riportati in allegato al Grant Agreement sub A);
- che in particolare il budget complessivo assegnato ad Arpa Emilia-Romagna per la realizzazione del Progetto è pari ad Euro 713.116,00, coperto fino all'importo massimo di Euro 307.285,00 dal finanziamento comunitario e per l'importo di Euro 405.831,00 da

proprio finanziamento;

- che Arpa, in qualità di beneficiario incaricato del coordinamento del Progetto Life OPERA, sottoscriverà con ciascuno dei beneficiari associati una convenzione finalizzata a disciplinare la collaborazione nell'ambito del Progetto, così come specificatamente previsto nel Grant Agreement allegato sub A);

CONSIDERATO:

- che i costi operativi esterni previsti a carico di Arpa Emilia-Romagna per la realizzazione del Progetto sono interamente coperti dal relativo finanziamento;
- che la quota di cofinanziamento a carico di Arpa è relativa alla copertura di spese di personale, così come dettagliato nell'allegato sub A);

CONSIDERATO INOLTRE:

- che gli obiettivi e le azioni proposte per la realizzazione del Progetto sono dettagliatamente descritti nel Grant Agreement allegato sub A);
- che ai fini della presentazione della proposta alla Commissione Europea il Servizio Risanamento Atmosferico, Acustico, Elettromagnetico della Regione Emilia-Romagna ha espresso una specifica manifestazione di interesse nel Progetto in considerazione della rilevanza tecnico-scientifica dello stesso;
- che, come già indicato nella proposta progettuale allegata al Grant Agreement sub A), il Responsabile del Progetto è il Dott. Eriberto de' Munari e il Responsabile Tecnico è il Dott. Marco Deserti;
- che la complessità tecnica e la rilevanza economica del Progetto di cui trattasi rende opportuna la costituzione di un gruppo di lavoro che ne segua ogni fase di realizzazione;

DATO ATTO:

- che per Arpa Emilia-Romagna i soggetti competenti all'attuazione e alla gestione del Progetto Life OPERA sono la Sezione provinciale di Parma, il Servizio IdroMeteoClima, la Direzione Tecnica e la Sezione Provinciale di Forlì-Cesena;
- che il budget assegnato ad Arpa Emilia-Romagna per la realizzazione del Progetto Life OPERA è articolato tra la Sezione provinciale di Parma, il SIMC, la Direzione Tecnica e la Sezione provinciale di Forlì-Cesena come dettagliato nella tabella allegata sub B) al presente atto quale parte integrante e sostanziale;
- che le suddette strutture potranno nell'arco della durata del Progetto concordare una diversa ripartizione dei costi e dei ricavi sulla base dell'effettiva realizzazione del Progetto stesso;
- che la Sezione provinciale di Parma ed il SIMC potranno, inoltre, nell'arco della durata

del Progetto coinvolgere nella realizzazione delle attività altre strutture di Arpa, previo accordo con i relativi Direttori in merito al monte ore previsto per l'impegno dei collaboratori individuati e al corrispondente trasferimento di quote di budget;

DATO ATTO INOLTRE:

- che così come previsto nel Grant Agreement allegato sub A) Arpa provvederà ad affidare a idoneo soggetto esterno le attività di certificazione di ogni costo connesso con il Progetto Life OPERA;

RITENUTO:

- opportuna, anche alla luce della manifestazione di interesse espressa dalla Regione Emilia-Romagna, la partecipazione di Arpa al Progetto Life OPERA garantendo il cofinanziamento di Euro 405.831,00, quota di costi non sostenuta dal finanziamento comunitario;
- di approvare il Grant Agreement sottoscritto con la Commissione Europea, allegato sub A) con tutti i relativi allegati, finalizzato a disciplinare la realizzazione del Progetto Life OPERA;
- di individuare il Direttore della Sezione provinciale di Parma quale soggetto legittimato ad agire, in qualità di delegato del legale rappresentante di Arpa Emilia-Romagna, nell'ambito del Progetto Life OPERA nei confronti della Commissione Europea e dei beneficiari associati, in particolare sottoscrivendo con ciascuno dei beneficiari associati una convenzione finalizzata a disciplinare la collaborazione nell'ambito del Progetto, così come previsto nel Grant Agreement allegato sub A);
- di delegare al Direttore della Sezione provinciale di Parma ed al Direttore del SIMC l'adozione di ogni atto che si renda necessario per garantire lo svolgimento delle attività progettuali, nell'ambito del budget riportato nella tabella allegata sub B);
- opportuno che il Direttore della Sezione provinciale di Parma provveda a costituire un gruppo di lavoro interno ad Arpa che segua ogni fase di realizzazione del Progetto Life OPERA;

SU PROPOSTA:

- del Direttore della Sezione provinciale di Parma, Dott. Giuseppe Dallara, il quale ha espresso, ai sensi del Regolamento per il Decentramento amministrativo, approvato con D.D.G. n. 65 del 27/09/2010, il proprio parere favorevole in ordine alla regolarità amministrativa del presente provvedimento;

DATO ATTO:

- del parere di regolarità contabile espresso dal Responsabile dell'Area Bilancio e Controllo

economico, Dott. Giuseppe Bacchi Reggiani, ai sensi del Regolamento per il Decentramento amministrativo approvato con D.D.G. n. 65 del 27/09/2010;

- che il responsabile del procedimento è il Responsabile del CTR Qualità dell'Aria Dott. Eriberto de' Munari;

#### DELIBERA

1. di prendere atto dell'approvazione da parte della Commissione Europea del Progetto "An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions" (Life OPERA), ammesso a cofinanziamento ai sensi del Programma comunitario Life09;
2. di dare atto che Arpa Emilia-Romagna riveste il ruolo di beneficiario incaricato del coordinamento e pertanto unico soggetto responsabile nei confronti della Commissione Europea per la realizzazione del Progetto e che i soggetti beneficiari associati sono l'Università degli Studi di Brescia, TerrAria S.r.l. e il Centre National de la Recherche Scientifique (CNRS);
3. di approvare il Grant Agreement sottoscritto con la Commissione Europea, allegato sub A) al presente atto quale parte integrante e sostanziale con tutti i relativi allegati, finalizzato a disciplinare la realizzazione del Progetto Life OPERA;
4. di dare atto che il Progetto di cui trattasi ha durata di mesi 37 a partire dall'01/09/2010 e pertanto si concluderà il 30/09/2013;
5. di dare atto che il costo complessivo stimato per la realizzazione del Progetto Life OPERA è pari ad Euro 2.301.010,00, coperto fino all'importo massimo di Euro 1.089.544,00 dalla Commissione Europea e per il rimanente importo attraverso cofinanziamenti dei soggetti beneficiari, come dettagliatamente descritto nel Grant Agreement allegato sub A);
6. di dare atto che per Arpa Emilia-Romagna i soggetti competenti all'attuazione e alla gestione del Progetto Life OPERA sono la Sezione provinciale di Parma, il Servizio IdroMeteoClima, la Direzione Tecnica e la Sezione Provinciale di Forlì-Cesena;
7. di individuare il Direttore della Sezione provinciale di Parma quale soggetto legittimato ad agire, in qualità di delegato del legale rappresentante di Arpa Emilia-Romagna, nell'ambito del Progetto Life OPERA nei confronti della Commissione Europea e dei beneficiari associati, in particolare sottoscrivendo con ciascuno dei beneficiari associati una convenzione finalizzata a disciplinare la collaborazione nell'ambito del Progetto, così come previsto nel Grant Agreement allegato sub A);

8. di delegare al Direttore della Sezione provinciale di Parma ed al Direttore del SIMC l'adozione di ogni atto che si renda necessario per garantire lo svolgimento delle attività progettuali, nell'ambito del budget riportato nell'allegato sub B) al presente atto quale parte integrante e sostanziale, dando atto che le suddette strutture potranno, nell'arco della durata del Progetto, concordare una diversa ripartizione dei costi e dei ricavi sulla base dell'effettiva realizzazione del Progetto stesso.

PARERE FAVOREVOLE

IL DIRETTORE TECNICO

(F.to Ing. Vito Belladonna)

IL DIRETTORE AMMINISTRATIVO

(F.to Dott.ssa Massimiliana Razzaboni)

IL DIRETTORE GENERALE

(F.to Prof. Stefano Tibaldi)



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL  
ENVIRONMENT  
Directorate E - International Affairs  
ENV.E.4 – LIFE Environment & Eco-innovation

## GRANT AGREEMENT

AGREEMENT NUMBER LIFE09 ENV/IT/000092

The European Union ("the Union"), represented by the European Commission ("the Commission"), itself represented for the purposes of signature of this agreement by Mr. Hervé MARTIN, Head of Unit, DG Environment,

of the one part,

and

Agenzia Prevenzione Ambiente Emilia-Romagna  
Via Po, 5  
40139 Bologna  
Italia

("the co-ordinating beneficiary"), represented for the purposes of signature of this agreement by Mr. Stefano Tibaldi, Director General,

and the following "associated beneficiaries":

- Università degli Studi di Brescia, established in Italy;
- Terraria srl, established in Italy;
- Centre National de la Recherche Scientifique, established in France.

who have conferred powers of attorney for the purposes of the signature of the agreement to the representative of the co-ordinating beneficiary

of the other part.

## HAVE AGREED

The **special provisions** and **common provisions** set out below and the following **Annexes**:

|                  |                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Annex I</b>   | Description of the proposal                                                                                                                                                                                |
| <b>Annex II</b>  | Standard statement of expenditure<br><a href="http://ec.europa.eu/environment/life/toolkit/pmtools/lifeplus/reporting.htm">http://ec.europa.eu/environment/life/toolkit/pmtools/lifeplus/reporting.htm</a> |
| <b>Annex III</b> | LIFE logo<br><a href="http://ec.europa.eu/environment/life/toolkit/comtools/resources/logos.htm">http://ec.europa.eu/environment/life/toolkit/comtools/resources/logos.htm</a>                             |
| <b>Annex IV</b>  | Standard audit report<br><a href="http://ec.europa.eu/environment/life/toolkit/pmtools/lifeplus/reporting.htm">http://ec.europa.eu/environment/life/toolkit/pmtools/lifeplus/reporting.htm</a>             |
| <b>Annex V</b>   | Financial identification of the co-ordinating beneficiary<br><a href="http://ec.europa.eu/budget/execution/ftiers_en.htm">http://ec.europa.eu/budget/execution/ftiers_en.htm</a>                           |

## SPECIAL PROVISIONS

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### *Article 1*

Financial support from Regulation (EC) N° 614/2007 of the European Parliament and of the Council of 23 May 2007 concerning the Financial Instrument for the Environment (LIFE+) is hereby granted to project proposal No LIFE09 ENV/IT/000092, title: "An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions", received on 10.06.2010, ("the project") as described in Annex I. The grant is governed by the terms and conditions set out in the Special Provisions, the Common Provisions and the annexes to the agreement which the coordinating beneficiary hereby declares that he has taken note of and accepts.

Three identical copies of the grant agreement have been produced, each signed by the co-ordinating beneficiary.

The co-ordinating beneficiary accepts the grant and undertakes to do everything in its power to carry out the project, as described in Annex I, acting on its own responsibility.

### *Article 2*

This agreement shall enter into force on the date when the last of the two parties signs.

The project shall run for 37 months from 01.09.2010 to 30.09.2013.

The total cost of the project is estimated at € 2.301.010, as shown in the provisional budget in Annex I. The provisional budget shall give a detailed breakdown of the costs that are eligible for the Union funding under the terms of Article 25 of the Common Provisions as well as the breakdown of all sources of finance. The financial support from the Union is hereby set at 47.67 % of the total eligible cost mentioned in Annex I with a maximum of € **1.089.544**. The final amount of the grant is determined as defined in Article 28 of the Common Provisions.

### *Article 3*

Done at Brussels in three copies, on . 27 JULY 2010

*For the coordinating beneficiary,*

  
Stefano Tibaldi  
Director General



*For the Commission,*

  
Hervé MARTIN  
Head of Unit



***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part A – Administrative information**

**NOTES:**

There are 5 sets of LIFE+ "Environment Policy and Governance" application forms: A, B, C and D (technical forms) and F (financial forms). The financial forms are in a separate Excel file.

While filling in the technical forms A – D, please respect the standard A4 format.

Whenever several copies of one form 2009-XY needs to be produced, please use the following naming convention per page: 2009-XY/1; 2009-XY/2 etc.



LIFE+ 2009

FOR ADMINISTRATION USE ONLY

LIFE+ 09 ENV/IT /082

## PROJECT

Project title (max. 120 characters):

**An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions.**

Project acronym (max. 25 characters): **OPERA** (Operational Procedure for Emission Reduction Assessment)

The project will be implemented in the following:

Countries: **Italy, France**

Administrative regions: **Emilia Romagna (IT), Alsace (FR)**

Expected start date: **September 1<sup>st</sup> 2010** Expected end date: **September 30<sup>th</sup> 2013.**

## BENEFICIARIES

Name of the coordinating beneficiary (1): **ARPA Emilia Romagna (IT)**

Name of the associated beneficiary (2): **Università degli Studi di Brescia (IT)**

Name of the associated beneficiary (3): **TerrAria s.r.l. (IT)**

Name of the associated beneficiary (4): **CNRS (FR)**

## PROJECT BUDGET AND REQUESTED EC FUNDING

Total project budget: 2.301.010 €

Total eligible project budget: 2.285.563 €

EC financial contribution requested: 1.089.544 € (= 47,67% of total eligible budget)

## PROJECT POLICY AREA

You can only tick one of the following options:

☐ Climate Change

☐ Urban environment

☐ Waste and natural resources

☐ Water

☐ Noise

☐ Forests

☒ **Air**

☐ Chemicals

☐ Innovation

☐ Soil

☐ Environment and Health

☐ Strategic approaches

| Coordinating Beneficiary Profile Information                                                              |                                                |              |                                                                       |                         |                                     |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------|-----------------------------------------------------------------------|-------------------------|-------------------------------------|
| Short Name                                                                                                | ARPA-ER                                        |              |                                                                       | Beneficiary n°          | 1                                   |
| Legal information on the Coordinating Beneficiary                                                         |                                                |              |                                                                       |                         |                                     |
| Legal Name                                                                                                | Agenzia Prevenzione Ambiente<br>Emilia-Romagna |              |                                                                       | Legal Status            |                                     |
| VAT No                                                                                                    | 042090860370                                   |              |                                                                       | Public body             | <input checked="" type="checkbox"/> |
| Legal Registration No                                                                                     | Not applicable                                 |              |                                                                       | Private commercial      | <input type="checkbox"/>            |
| Registration Date                                                                                         | Not applicable                                 |              |                                                                       | Private non- commercial | <input type="checkbox"/>            |
| Legal address of the Coordinating Beneficiary                                                             |                                                |              |                                                                       |                         |                                     |
| Street Name and No                                                                                        | Via Po, 5                                      |              |                                                                       | PO Box                  |                                     |
| Post Code                                                                                                 | 40139                                          | Town/City    | Bologna                                                               |                         |                                     |
| Country Code                                                                                              | IT                                             | Country Name | Italia                                                                |                         |                                     |
| Coordinating Beneficiary contact person information                                                       |                                                |              |                                                                       |                         |                                     |
| Title                                                                                                     | Dottor                                         | Function     | Responsabile Centro Tematico Qualità<br>dell'Aria Arpa Emilia-Romagna |                         |                                     |
| Surname                                                                                                   | De Munari                                      |              | First Name                                                            | Eriberto                |                                     |
| E-mail address                                                                                            | edemunari@arpa.emr.it                          |              |                                                                       |                         |                                     |
| Department / Service                                                                                      | Sezione di Parma                               |              |                                                                       |                         |                                     |
| Street Name and No                                                                                        | Via Bottego, 9                                 |              |                                                                       | PO Box                  |                                     |
| Post Code                                                                                                 | 43121                                          | Town/City    | Parma                                                                 |                         |                                     |
| Country                                                                                                   | ITALIA                                         |              |                                                                       |                         |                                     |
| Telephone No                                                                                              | +390521976122                                  |              | Fax No                                                                | +390521976155           |                                     |
| Coordinating Beneficiary details                                                                          |                                                |              |                                                                       |                         |                                     |
| Year                                                                                                      | 2008                                           |              |                                                                       |                         |                                     |
| Annual turnover                                                                                           | Not applicable                                 |              | Annual Balance Sheet Total                                            | Not applicable          |                                     |
| Number of employees                                                                                       | 1.049 (31/12/2008)                             |              |                                                                       |                         |                                     |
| Website                                                                                                   | www.arpa.emr.it                                |              |                                                                       |                         |                                     |
| Brief description of the Coordinating Beneficiary's activities and experience in the area of the proposal |                                                |              |                                                                       |                         |                                     |

The Agenzia Regionale per la Prevenzione e l'Ambiente dell'Emilia-Romagna (Regional Agency for Environmental Protection in Emilia-Romagna) is an environmental control technical support body to the regional, district and local authorities and is administratively and technically independent. Arpa develops and promotes control and prevention supporting local and regional governance in order to plan and govern environment. Main of the activities of ARPA-ER are focused on technical measurements of environmental pollution (air, waste, water etc) and to support the policy makers providing technical tools to produce plans to manage the European and National environmental normative target.

Arpa's functions, activities and tasks cover all aspects concerning environmental control, including monitoring of the various environmental components, management and surveillance of human activities and their territorial impacts, activities in support of the environmental impact assessment of plans and projects, creation and management of a regional environmental information system. Also of great importance are study and characterisation of ecosystems, research into themes associated with the development of environmental prevention in production cycles (Life Cycle Assessment, Best Available Technique, etc.).

The Agency's activities are aimed at local, regional and national institutional customers, the business world and private citizens.

Arpa also collaborates with the Italian Agency for the Environment and Territory, the European Environmental Agency and Italian, European and international institutes and research centres.

Integrated environment-territory-health prevention and support to environmental sustainability policies promoted by the Region are the objectives common to many of Arpa's activities and the basic elements of the Agency's mission. Arpa operates an environmental management and control system which integrates activities associated with verification of conformity to regulations and standards with study and analysis of the causes of degradation and their relative effects. This objective is condensed in Arpa's vision statement, to be attained through coherent evolution and the adoption of strategies for implementing the mission. Arpa carries out environmental controls to safeguard health, ecosystems and territorial safety, to promote use of resources within a framework of sustainable development.

Arpa Emilia-Romagna has developed a special focus on Air Quality monitoring, forecasting, evaluation and managing.

The main services delivered by ARPA Emilia-Romagna (<http://www.arpa.emr.it/>) for air quality are:

- Air quality monitoring, data dissemination and official reporting
- Emission inventory
- Air quality assessment and scenario analysis for supporting local authorities in their planning activities
- Daily air quality forecast bulletin for the Emilia-Romagna Region
- Chemical weather operational numerical forecast/hindcast for Northern Italy
- Processed meteorological data for dispersion models,
- Dispersion modelling for urban areas and industrial pollution
- Assessment of deposition and critical loads exceedances

Several projects focused on Air Quality are currently (2009) running. The main projects relevant for Air quality topics are:

- NINFA-E "an Integrated assessment tool for air quality " (ER government), 2009-2010
- MONITER - waste incinerator survey in the Emilia-Romagna region (ER government), 2007-2010
- GEMS - Global Earth Monitoring Systems (6th EU FP), 2005-2009
- MACC - Monitoring Atmospheric Composition and Climate (7th EU FP), 2009-2012
- QUITSAT- a satellite based prototype system for AQ management (Italian Spatial Agency), 2007-2010



**COORDINATING BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. The specific actions listed in this proposal do not and will not receive aid from the Structural Funds or other Community financial instruments. In the event that any such funding will be made available after the submission of the proposal or during the implementation of the project, my organisation will immediately inform the European Commission.
2. My organisation ...ARPA Emilia-Romagna..... has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
3. My organisation (which is legally registered in the European Union) will contribute (add amount) 405 831 € to the project. My organisation will participate in the implementation of the following actions: C1, P1, P2, I3, M1, M2. The estimated total cost of my organisation's part in the implementation of the project is 713 116 €.
4. Should one or more associated beneficiary or co-financier reduce or withdraw its financial contribution, my organisation will ensure that a corresponding additional contribution is made available.
5. My organisation will conclude with the associated beneficiaries and co-financiers any agreements necessary for the completion of the work, provided these do not infringe on their obligations, as stated in the grant agreement with the European Commission. Such agreements will be based on the model proposed by the European Commission. They will describe clearly the tasks to be performed by each associated beneficiary and define the financial arrangements.
6. I am aware that my organisation is solely legally and financially responsible to the Commission for the implementation of the project (Article 4 of the Common Provisions).

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Bologna on 9 / 08 / 2009

Signature of the Associated Beneficiary:

Name(s) and status of signatory: STEFANO TADDEI  
COORDINATORE GENERALE

**ARPA**

Agenzia regionale per la protezione  
e l'ampliamento dell'ambiente  
IL DIRETTORE GENERALE  
Prof. Stefano Taddei

**ASSOCIATED BENEFICIARY DECLARATION (complete for each Associated Beneficiary)**

The undersigned hereby certifies that:

1. My organisation **Università degli Studi di Brescia** has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally registered in the European Union) will contribute (add amount) **287.232€** to the project. My organisation will participate in the implementation of the following actions: **P1, P2, P3, I1, I2, I3, I4, C1, M1**. The estimated total cost of my organisation's part in the implementation of the project is **573.445€**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

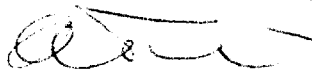
I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Brescia on 24 MAR 2010

Signature of the Associated Beneficiary:




Name(s) and status of signatory: Prof. Augusto Preti Rector

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |                     |                               |                                     |
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| <b>Short name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UNIBS                             |                     | <b>Beneficiary n°</b>         | 2                                   |
| Legal information on the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |                     |                               |                                     |
| <b>Legal Name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Università degli Studi di Brescia |                     | <b>Legal Status</b>           |                                     |
| <b>VAT No</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 01773710171                       |                     | <b>Public body</b>            | <input checked="" type="checkbox"/> |
| <b>Legal Registration No</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NA                                |                     | <b>Private commercial</b>     | <input type="checkbox"/>            |
| <b>Registration Date</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | NA                                |                     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Legal address of the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                   |                     |                               |                                     |
| <b>Street Name and No</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Piazza del Mercato, 12            |                     | <b>PO Box</b>                 |                                     |
| <b>Post Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 25121                             | <b>Town/City</b>    | Brescia                       |                                     |
| <b>Country Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | IT                                | <b>Country Name</b> | Italy                         |                                     |
| Brief description of the Associated Beneficiary's activities and experience in the area of the proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                   |                     |                               |                                     |
| <p>The Environmental System Modelling and Assessment (ESMA) research group (<a href="http://automatica.ing.unibs.it/esma/esma.html">http://automatica.ing.unibs.it/esma/esma.html</a>) works at the Department of Electronics for Automation of the University of Brescia. The ESMA team scientific work mainly deals with air quality modelling and management, in particular concerning a) emission control strategies using Eulerian 3D models, b) forecast and alarm systems and c) methodologies to select optimal air quality control policies, through cost-efficient / multi-objective optimization techniques. The group joined several national and international air quality scientific projects and activities, as the EUREKA EUOTRAC-2 Eu project, COST 715 Action (Meteorology Applied to Urban Air Pollution), CityDelta-CAFE EU project (<a href="http://aqm.jrc.it/citydelta/">http://aqm.jrc.it/citydelta/</a>).</p> <p>Currently the team takes part in COST 728 Action (Enhancing meso-scale meteorological modelling capabilities for air pollution and dispersion applications) and COST ES0602 Action (Towards a European Network on Chemical Weather Forecasting and Information Systems) activities. Moreover the researchers are active in the Task Force on Measurements and Modelling (TFMM), the Task Force on Integrated Modelling Assessment (TFIAM) and the Task Force on Hemispheric Transport of Air Pollution (HTAP) in the frame of the UNECE International Convention on Long-Range Transboundary Air Pollution (LRTAP). Present research activities are mainly performed within the following scientific environments: EU Network of Excellence ACCENT, Atmospheric Sustainability and Transport and Transformations (<a href="http://www.accent-network.org/portal/science">http://www.accent-network.org/portal/science</a>), EU Network for Integrated Assessment Modelling (NIAM, <a href="http://www.niam.scarp.se/">http://www.niam.scarp.se/</a>), QUITSAT research project, funded by Italian Space Agency (<a href="http://www.quitsat.it/">http://www.quitsat.it/</a>) and the Regional Assessment Tool (RIAT) Development EU project, funded by IES-JRC (Service contract, ref: 384364).</p> |                                   |                     |                               |                                     |

**ASSOCIATED BENEFICIARY DECLARATION (complete for each Associated Beneficiary)**

The undersigned hereby certifies that:

1. My organisation (*add name*) **TERRARIA SRL** has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally registered in the European Union) will contribute **294'379 €** to the project. My organisation will participate in the implementation of the following actions: **P1, I1, I2, I3, I4, C1, C2, M1**. The estimated total cost of my organisation's part in the implementation of the project is **577'962€**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

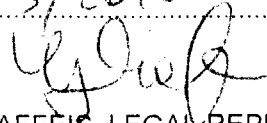
I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Bulona on 31/5/2010

Signature of the Associated Beneficiary:



Name and status of signatory: GIUSEPPE MAFFEIS, LEGAL REPRESENTATIVE

**TerrAria s.r.l.**

Via M. Gioia, 132 - 20125 Milano  
Tel. +39.02.87085650 - Fax +39.02.97376569  
Cod. Fisc. e P. IVA 00744290149

## ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)

| Associated Beneficiary profile information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |              |                        |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------|------------------------|------------------|
| Short name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |              |                        | Beneficiary n° 3 |
| Legal information on the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |              |                        |                  |
| Legal Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TERRARIA srl                |              | Legal Status           |                  |
| VAT No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 00744290149                 |              | Public body            |                  |
| Legal Registration No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 00744290149                 |              | Private commercial     | √                |
| Registration Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 18/04/2003                  |              | Private non-commercial |                  |
| Legal address of the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |              |                        |                  |
| Street Name and No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Via Melchiorre Gioia n. 132 |              | PO Box                 |                  |
| Post Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20125                       | Town/City    | Milan                  |                  |
| Country Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | IT                          | Country Name | Italy                  |                  |
| Brief description of the Associated Beneficiary's activities and experience in the area of the proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |              |                        |                  |
| <p>TerrAria (<a href="http://www.terraria.com">www.terraria.com</a>) was established in 1999 in Milan with the aim to join IT (Information Technology) with environmental expertise on deterministic and stochastic modelling. During these years TerrAria has developed several decision support systems applied to environmental sector; these are the main applications developed in the area of the proposal:</p> <ul style="list-style-type: none"> <li>– RIAT Regional Integrated Assessment Tool, a decision support tool aimed at identifying the optimal mix of policies to reduce emissions of air pollutants in terms of cost effectiveness using cost functions and source- receptor neuronal functions</li> <li>– INEMAR (<a href="http://www.arpalombardia.it/inemar/inemarhome.htm">http://www.arpalombardia.it/inemar/inemarhome.htm</a>) a stand alone application to calculate regional and local emissions through different modules and distribute them to the public through a web interface. INEMAR is actually in use in seven Italian Regional Authorities (Lombardy, Piedmont, Emilia Romagna, Veneto, Friuli Venezia Giulia, Puglia, Trentino Alto Adige).</li> <li>– POLLWEB a real time web application with a restricted access containing information, analysis and model forecast on air quality data developed for Lombardy Region,</li> <li>– SIRENA (<a href="http://sirena.cestec.eu/sirena/index.jsp">http://sirena.cestec.eu/sirena/index.jsp</a>) a web application to compute Energy Demand and Energy Production and related atmospheric emissions (Lombardy Region) of both greenhouse gases and pollutants</li> <li>– SINERGIE, an advanced Decision Support System specifically developed to meet the needs of the Public Authorities involved in the mitigation, prevention and management of environmental risks (Civil Protection Lombardy Regional Agency DSS),</li> </ul> <p>TerrAria's IT sector is focused on developing tools and web based geographical information system based on open source platform such as java platform and web-services technology, which ensure a high level of modularity, scalability and fast access performances.</p> <p>TerrAria's environmental sector is focused on the implementation of environmental model, both interesting emission inventory (COPERT - CORINAIR) and air quality impact (CALPUFF – CALINE – CAMx...).</p> |                             |              |                        |                  |

**ASSOCIATED BENEFICIARY DECLARATION (complete for each Associated Beneficiary)**

The undersigned hereby certifies that:

1. My organisation (*add name*) **CNRS** has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally registered in the European Union) will contribute (*add amount*) 224,024 € to the project. My organisation will participate in the implementation of the following actions (*add action code(s)*): M1, P3, I4, C1. The estimated total cost of my organisation's part in the implementation of the project is (*add amount*) 436'487 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

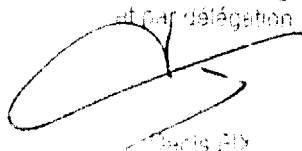
I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Strasbourg..... on **31 MAI 2010**.....

Signature of the Associated Beneficiary: M. Bertrand Minault, Regional Delegate of the CNRS in Alsace

*Regional Delegate*  
*et par délégation*  
  
*Minault M.*

| Associated Beneficiary profile information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |                |                                                             |                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| CNRS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                              | Beneficiary n° | 4                                                           |                                                                                             |
| Legal information on the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                              |                |                                                             |                                                                                             |
| Legal Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Centre National de la Recherche Scientifique |                | Legal Status: Valid                                         |                                                                                             |
| VAT No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FR40180089013                                |                | Public body<br>Private commercial<br>Private non-commercial | <input checked="" type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |
| Legal Registration No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 180089013                                    |                |                                                             |                                                                                             |
| Registration Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19/10/1939                                   |                |                                                             |                                                                                             |
| Legal address of the Associated Beneficiary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                              |                |                                                             |                                                                                             |
| Street Name and No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rue Michel-Ange, 3                           |                | PO Box                                                      |                                                                                             |
| Post Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 75794                                        | Town/City      | Paris                                                       |                                                                                             |
| Country Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | F                                            | Country Name   | France                                                      |                                                                                             |
| Brief description of the Associated Beneficiary's activities and experience in the area of the proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                              |                |                                                             |                                                                                             |
| <p>The CNRS (National Center for Scientific Research) is a government-funded research organization, under the administrative authority of France's Ministry of Research. As the largest fundamental research organization in Europe, CNRS carried out research in all fields of knowledge.</p> <p>The project involves researchers from unity ERL7230 (<b>Laboratoire Image, Ville, Environnement</b>) of the CNRS which studies urban processes linking social and spatial aspects. The research topics include urban management, environmental risks (especially air pollution modelling), risks management and quality of life. It has been involved in the project "Benefits of Urban Green Space" (BUGS, 2001-2004, EU 5<sup>th</sup> FWP) co-ordinated by the VITO.</p> <p>The Unit has been active on many European projects related to these themes including: COST 615; COST 715; COST 728 for which he was the Swiss delegate; FUMAPEX – FP5; and MOST – FP5.</p> |                                              |                |                                                             |                                                                                             |

**CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)**

| Legal Name and full address on the co-financier         |            |
|---------------------------------------------------------|------------|
|                                                         |            |
| Financial commitment                                    |            |
| We will contribute the following amount to the project: | ..... Euro |
| Status of the financial commitment                      |            |
|                                                         |            |
| Signature of the authorised person                      |            |
| Name and status of the authorised person (obligatory):  |            |
| Date of the signature (obligatory):                     |            |
| Authorised signature (obligatory):                      |            |

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## OTHER PROPOSALS SUBMITTED FOR COMMUNITY FUNDING

Please answer each of the following questions :

- Have you or any of your associated beneficiaries already benefited from previous LIFE co-financing? (please cite LIFE project reference number, title, year, amount of the co-financing, duration, name(s) of coordinating beneficiary and/or partners involved):

List of LIFE projects in which ARPA-ER was involved:

| Code                 | Title                                                                                                                                      | Year of Finance: | TOTAL Budget   | Life Contribution | Duration  | Coordinator                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|-------------------|-----------|--------------------------------------------------------------------------------------------------------------------|
| LIFE97 ENV/IT/000106 | Demonstrative implementation on an innovative system of rational use and re-use of water in a reside                                       | 1997             | € 1.285.094,96 | € 637.386,00      | 1997-2001 | ENEA - Italian National Agency for New Technologies, Energy and the Environment                                    |
| LIFE98 ENV/IT/000098 | Information System for the Orientation of Local Actions (I.S.O.L.A.)                                                                       | 1998             | € 504.212,51   | € 453.224,00      | 1998-2002 | Comune di Modena                                                                                                   |
| LIFE00 ENV/S/000852  | European ecoBudget pilot project for local authorities steering to local sustainability                                                    | 2000             | € 2.330.660,00 | € 1.022.765,00    | 2001-2004 | Växjö Kommun (Municipality of Växjö)                                                                               |
| LIFE00 ENV/NL/000810 | Eco-labels for Sustainable Tourism in Europe: demonstrating how Eco-labels can move the European tourism market towards sustainability     | 2000             | € 1.804.918,00 | € 882.858,00      | 2001-2004 | European Centre of Eco Agro Tourism                                                                                |
| LIFE00 ENV/IT/000215 | T O R R E - Organized tourism recover rural ecology                                                                                        | 2000             | € 582.752,00   | € 265.629,00      | 2001-2004 | Comune di Faenza                                                                                                   |
| LIFE02 NAT/IT/008526 | Restoration of ecological balance for conserving the habitats of species of Community interest                                             | 2002             | € 1.434.820,52 | € 573.928,21      | 2002-2005 | Regione Emilia-Romagna-<br>Direz.Gen.Ambiente e Difesa del Suolo e della Costa-Servizio Parchi e Risorse Forestali |
| LIFE03 ENV/IT/000327 | Production and use of high quality compost in the Ferrara area : optimisation of the flow of wastes                                        | 2003             | € 669.529,00   | € 267.811,60      | 2003-2007 | Recupera S.r.l.                                                                                                    |
| LIFE04 ENV/IT/000547 | Demonstrating the reduction of greenhouse gases and air pollution through a homeostatic mobility planning aiming at road traffic balancing | 2004             | € 1.599.348,00 | € 767.174,00      | 2004-2007 | Provincia di Bologna                                                                                               |
| LIFE04 ENV/IT/000479 | Environmental Management through Monitoring and Modelling of Anoxia                                                                        | 2004             | € 1.858.089,02 | € 903.709,00      | 2004-2007 | Consiglio Nazionale delle Ricerche, Istituto di Scienze Marine, Sezione di Bologna                                 |
| LIFE07 ENV/IT/000451 | Local Accountability for Kyoto Goals                                                                                                       | 2007             | € 1.304.758,00 | € 652.379,00      | 2009-2011 | Comune di Reggio Emilia                                                                                            |

List of LIFE projects in which CNRS was involved:

LIFE98 ENV/F/000326

Treatment and valorisation of municipal waste fly ash using a thermochemical conversion Total LIFE contribution: 208,119.58 € Duration : 4 years 1998-2001 Coordinator :Recupyl SA Partner: CNRS

LIFE03 NAT/F/000102

Conservation des populations d'oiseaux marins des îles de Marseille Total LIFE contribution: 462 362€

Duration: 01.03.2003 to 31.12.2007

Coordinator: Conservatoire - Études des Écosystèmes de Provence (CEEP)

Partners: CNRS, Association Alpes de Lumière

LIFE03 NAT/F/000103

Plan de sauvegarde du percnoptère d'Égypte dans le Sud-Est de la France Total LIFE contribution: 1 128 485€

Duration: 01.09.2003 to 30.04.2008

Coordinator: Ligue pour la Protection des Oiseaux

Partners: Centre Ornithologique Rhône-Alpes (CORA), Ligue pour la Protection des Oiseaux de l'Aude (LPO Aude), dans le département de l'Aude, Syndicat Mixte des Gorges du Gardon (SMGG), Parc Naturel Régional du Luberon (PNR du Luberon), Conservatoire Etudes des Écosystèmes de Provence (CEEP), Syndicat Mixte des Gorges du Gardon (SMGG), Centre National d'Informations Toxicologiques Vétérinaire (CNITV), Centre National de la Recherche Scientifique (CNRS).

LIFE03 ENV/S/000601

Demonstration of Opportunities on Forest Land to Support the Implementation of the Water Framework Directive Total LIFE contribution: 1 499 556€

Duration: 01.09.2003 – 31.08.2007

Co-ordinator: Swedish Forest Agency (Skogsstyrelsen)

Partners: Forestry Commission, Office National des Forêts, Centre National de la Recherche Scientifique, WWF, Skogsstyrelsen Region Nord, Skogsstyrelsen Region Väst, Skogforsk, Sveriges lantbruksuniversitet, Länsstyrelsen i Västerbottens län,

LIFE06 ENV/F/000132

Collaborative Technological Platform for implementation for WDF within agricultural context (Concert'Eau) Total LIFE contribution: 1 394 367€

Duration: 01.10.2006 to 30.09.2009

Coordinator: Association pour le Développement de l'Enseignement et des Recherches auprès des universités, des centres de recherche et des entreprises d'Aquitaine

Partners: ADERA, CEMAGREF, CNRS, CRANA, Infoterra, INPT, INRA, IRH, UT1, AKKA Technologies

- Have you or any of the associated beneficiaries submitted any actions related directly or indirectly to this project to other Community financial instruments? To whom? When and with what results, and how are these related to the present proposal?

A service contract (Ref: 384364) has been awarded by the Joint Research Centre (JRC) of the European Commission to the University of Brescia to develop the Regional Integrated Assessment Model (RIAT) which constitutes one of the modules to be further developed and integrated in this LIFE proposal. This contract has been signed in December 2008 for a duration of 18 months.

- For those actions which fall within the eligibility criteria for financing through other Community financial instruments, please explain in detail why you consider that those actions nevertheless do not fall within the main scope of the instrument(s) in question and are therefore included in the current project.

The project aims to develop methodology, tool and guidelines to support local authorities for the planning of regional policies integrated with national and European actions in order to comply with National and EU air quality standards (COM(2005) 446, 2008/50/EC). The proposal starts from a pilot study funded by JRC-IES (University of Brescia as beneficiary) and involves stakeholders in defining approaches to assess mitigation plans and in policy

consultation and implementation.

The proposal meets all the specific objectives of LIFE+ Environment Policy and Governance, listed in the article 4 of the Regulation (EC) No 614/2007 concerning the Financial Instrument for the Environment (LIFE+):

- (a) to contribute to the development and demonstration of innovative policy approaches, technologies, methods and instruments;
- (b) to contribute to consolidating the knowledge base for the development, assessment, monitoring and evaluation of environmental policy and legislation;
- (c) to support the design and implementation of approaches to monitoring and assessment of the state of the environment and the factors, pressures and responses that impact on it;
- (d) to facilitate the implementation of Community environmental policy, with particular emphasis on implementation at local and regional level;
- (e) to provide support for better environmental governance by broadening stakeholder involvement, including that of NGOs, in policy consultation and implementation.

Moreover, even if the project foresees two regional applications, it aims to define standard methodology, tool and guidelines that could in principle be applied for every European region. In this sense, the proposal does not fall in the framework of structural funds such as INTERREG programmes.



***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part B – Objectives and expected results**

- No financial information should be included in these forms.
- All forms in this section may be lengthened, so as to include all essential information.

## SUMMARY DESCRIPTION OF THE PROJECT

**Project title: OPERA (Operational Procedure for Emission Reduction Assessment)**

**An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions.**

### Project objectives:

In agreement with the national priorities for Italy (4. Air), with the EU Thematic Strategy for air quality (COM(2005) 446) and the DIRECTIVE 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe, the project objectives are:

- Set-up a methodology to assist local (sub-national) authorities in:
  - a) preparing, implementing and monitoring air quality plans to reduce population exposure to PM10, NOx and O3 pollution and ecosystems exposure to NOx and O3.
  - b) integrating regional air quality plans with national and European plans
  - c) assessing the synergies between actions to reduce the burden of poor air quality and actions to limit climate change impacts
- Develop an integrated assessment tool (RIAT+) to support the proposed methodology
- Apply this integrated tool on the Emilia-Romagna (Italy) and Alsace (France) regions
- Define guidelines for regional authorities to apply the methodology and tool
- Disseminate the guidelines and tool to local authorities, technical organizations and to the public at national and European levels

### Actions and means involved:

The goal of the project is to develop a methodology and guidelines to support local authorities for the planning of regional policies integrated with national and European actions in order to comply with National and EU air quality standards, considering potential synergies with actions to reduce GHG emissions. This project will be performed in the context of existing agreements between national and regional administrations to reach a common goal in a consistent and efficient way.

Three preparatory actions will be performed:

- P1 – Review of existing plans and methodologies, identification of RIAT+ requirements
- P2 - Data collection for the Italian case study
- P3 - Data collection for the French case study

The first action will be realized through direct consultation with European, national and local institutions responsible for air quality planning. It aims at identifying strengths and weaknesses in the currently available methodologies and at proposing a set of requirements to improve them. The analysis will mainly be focused on the tools already available by the partners of this LIFE proposal, e.g. the NINFA system of ARPA-ER (I) and the AtmoRhénA system of CNRS, as well as the RIAT system by JRC.

P2 and P3 actions aim to provide the databases required for the application of RIAT+ to Emilia Romagna (action I3) and Alsace (action I4) regions.

The core of the project is the improvement of existing tools and their implementation, which can be summarized by its four main actions:

- I1 - RIAT+ methods and design
- I2 – RIAT+ software implementation

I3 - Application to Emilia Romagna (I) region

I4 - Application to the Alsace (F) region

The design of the system and the software development will be realized following EU standards on data exchange (Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE DIRECTIVE)), using open source software and released to the end-users under a public license.

A main focus of the project will be to ensure the versatility of the approach and in particular the possible application of the methodology to other European locations than those considered in this proposal. The two local applications considered here are therefore intended to test the methodology and tool and to finalize the technical documentation and application guidelines. These steps are indeed essential before the dissemination of RIAT+ to a wider public, stage which is performed by means of two main actions:

C1- During project communication

C2- After LIFE+ communication

These activities will be realized by dissemination of the tool and accompanying guidelines directly to public administrations and via internet. Training courses will be organized for new users (public managers and technicians) and workshops will regularly take place to ensure an efficient sharing of experience among users as well as a continuous forum where new developments may be presented.

The coordination of the project includes two main actions:

M1- Project Management

M2- Monitoring project's effectiveness

Expected results (outputs and quantified achievements):

- A methodology and tool (RIAT+) to support local authorities in designing and assessing efficient air quality plans.
- RIAT+ application to Emilia Romagna and Alsace and assessment of air quality plans in these two regions.
- A register including existing and new emission reduction measures (technical and non-technical) applied in the areas of the proposal. (Each action will be defined by its abatement efficiency and cost and will be linked to site specific implementation strategies).
- A full documentation, workshop and courses to support new users implementing the methodology to other European regions.
- A standardized set of quantitative indicators to monitor the action plans effectiveness.
- Guidelines for local administrations and environmental agencies (this is a national priority for Italy) to integrate local planning to national and European air quality policies.

Can the project be considered to be a climate change adaptation project?

Yes ☐

No ☒

## ENVIRONMENTAL PROBLEM TARGETED

Air Pollution remains one of the most important environmental issue in Europe as confirmed with the adoption by the European Parliament of the resolution on the Thematic Strategy on Air Pollution which aims to attain levels of air quality that do not give rise to significant negative impacts on, and risks to human health and environment. However in spite of application of the current legislation devoted to air pollution control, some regions in Europe will keep pollutant levels damageable to human health and to ecosystems.

This is the case of the Po-Valley where the combination of high population densities, high emission densities and poor meteorological dispersion lead to adverse impact on population due to high levels of fine particulate matter ( $PM_{2.5}$ ) and on ecosystems due to high levels of ozone and eutrophication. Although less dramatic air pollution problems are encountered in the Alsace region, the high population density in the Upper Rhine valley, the important traffic fluxes across three countries (France, Germany and Switzerland) as well as the presence of important industrial areas (Ruhr region in the north east and the Basel area in the south) generate a deterioration of the air quality which results in frequent exceedances of the limit values for particulate matter and ozone compounds.

The importance of long-range transported air pollution in the Emilia Romagna is different than in the Alsace region but a combination of local, national and international measures is necessary to reduce adverse effects of poor air quality in these two regions.

The objective of this proposal is to develop and apply a methodology to assess the efficiency of locally planned abatement measures, which remain coherent with national and international frameworks.

Each action in the Air Quality Plan will be evaluated both in terms of air quality benefits and in terms of costs. The goal is to maximize the environmental benefits at fixed costs, or minimize costs at fixed environmental benefits. RIAT+ should support the understanding of how the pool of the actions chosen could be correctly mixed and implemented to reduce the air pollution considering the budget assigned and obtaining the maximum reduction effectiveness of the plan itself.

As any decision support tool, the proposed RIAT+ alone (i.e. without implementation of policies) cannot provide direct and immediate environmental benefits. However, the proposed integrated approach to air quality problem has already demonstrated the ability of being extremely important for negotiations as well as for determining improved environmental policies (M. Amann (2007) 'Formal Models and International Negotiations', in 'Diplomacy Games', Eds. Avenhaus R. and Zartman I. W., Springer Berlin Heidelberg). At European level, the RAINS model, for instance, developed by the International Institute for Applied Systems Analysis (IIASA), has been used to reach an agreement on the Second Sulphur Protocol in 1994. Later on the same model was used for Gothenburg Protocol to Abate Acidification, Eutrophication, and Ground-level Ozone and proved essential also to provide a common communication means among stakeholders as well as a common scientific background. Today, the extension of the same model to greenhouse gases, GAINS, is being used to provide support to post-Kyoto agreements.

RIAT+, being a tool based on an integrated assessment modeling approach as RAINS model, may be used by a regional authority to determine emission policies or to allow discussion and negotiations among groups of stakeholders.

The procedure that the authority has to follow to take advantage of RIAT+ for environment's sake are the following.

- Identify the area or the subarea suffering by unacceptable air quality conditions (for one or more pollutants)
- Determine the criterion for judging alternative policies (e.g., minimum cost, maximum air quality, minimum emissions,...)
- Define the feasible actions (enforce a given cleaning technology, tax emissions, apply reductions to a certain sector or a certain subarea,...)
- Use the system (possibly) several times to determine (possibly) different alternative solutions
- Compare these solutions with the involvement of relevant stakeholders.
- Select one for implementation, i.e. realize the actions that have been agreed.

An example may be the achieving of the compliance of PM<sub>10</sub> average yearly concentration limit of 40 µg/m<sup>3</sup> in the urban areas cells actually overcoming it, by treating emissions of some industrial sector at minimum cost. Note that the solution may also be infeasible, which means that this type of specific action may prove to be not sufficient to reach the required environmental quality.

A key feature of the proposed approach is indeed the possibility of solving the inverse problem, i.e. to allow the stakeholders to set the desired environmental quality and find the best way to reach that result, which is essential when dealing with a region with a variety of activities, land uses and physical conditions, and thus involving several different interest groups.

Moreover EU directives request Member States to plan measures in order to reduce the adverse effects of poor air quality but also to plan measures to limit the impact of anthropogenic emissions on climate change. As demonstrated with the use of integrated assessment tools at the EU scale, synergies may be found between these two types of measures (air quality and climate). It is one of the objectives of this proposal to provide local Authorities with a quantitative measure of the climate benefits of their planned air quality actions in their region.

## STATE OF THE ART AND INNOVATIVE ASPECTS OF THE PROJECT

Tropospheric pollutants (as ozone and PM<sub>10</sub>) originate from chemical reactions in the atmosphere involving precursor emissions, namely volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), primary particulates (PM) and sulphur oxides (SO<sub>2</sub>). Decision Makers are interested in developing plans that improve air quality (reducing exposure to tropospheric pollutants) acting in terms of precursor emission reductions. This task, needed to fulfil EU directive 2008/50 requirements, is quite challenging due to nonlinearities driving the formation and accumulation of ozone and PM<sub>10</sub>. Such task is even more difficult when considering at the same time air quality improvement and policy cost implementation.

Integrated assessment models have been originally formalized and implemented at the continental scale (RAINS, GAINS by IIASA (Amann et al., 2004a)). They implement a cost-effective analysis approach and a rough description of the environmental targets, both in terms of spatial resolution and accuracy of pollution-precursor relationships.

In recent years, integrated assessment models at continental scale have been adapted to the national scale (RAINS-Italy by ENEA, RAINS-Netherlands, FRES (Finland), UK-IAM (Oxley and ApSimon, 2007), Belgium-IAM). These models implement the same methodology and are fed by national emission and measure datasets, source-receptor matrixes estimated by processing national CTM simulations. Such methodology is indeed adequate to support the negotiation between EU and UNECE member states, but it is not flexible and comprehensive enough to support the Air Quality Managers at the sub-national scale. Nowadays most of these air quality managers lack tools for an efficient planning and are limited to the use of simpler approaches, consisting in scenario evaluation (see method (a) below).

The objective of this proposal is to fill this gap by defining guidelines, designing an enhanced methodology and implementing a tool to identify efficient local policies complying, on one hand, with National and EU air quality standards and, on the other hand, with local emission and meteorological features, financial, technological and social constraints. Therefore the proposed IAM is focused on local to meso-scale to interpret the specific features of the area, the domain meteorological and chemical conditions, the contribution of regional and local precursor emissions.

In the literature the following Integrated Assessment Modelling (IAM) methodologies, are presented to evaluate alternative emission reductions:

- (a) scenario analysis (Thunis et al., 2007), performed by evaluating the impact of emission reduction scenarios on air quality, using modelling simulations.
- (b) Cost-benefit analysis (Rabl, Spadaro, & Zwaan, 2005; Reis, Nitter, & Friedrich, 2005), consisting in the monetization of the costs and benefits associated to an emission scenario and in the maximization of a comprehensive target function.

- (c) Cost-effectiveness analysis (Carlson, Haurie, Vial, & Zachary, 2004; Shih, Russell, & McRae, 1998), assuming the non-monetizable targets as constraints of an optimization problem maximizing only the monetizable objectives.
- (d) Multi-objective analysis (Carnevale, Pisoni, & Volta, 2007; Pisoni, Carnevale and Volta, 2009; Guariso, Pirovano, & Volta, 2004), considering all the targets (in terms of costs and air quality) in a vector objective function; such approach implies to run into the mathematical and numerical difficulties following from the integration in the optimization problem of the nonlinear dynamics involved in ozone and PM10 formation.

The pollution-precursor relationship (used in methodologies (b), (c), (d)) can be simulated by deterministic 3D modelling systems, describing chemical and physical phenomena generating tropospheric pollutants. Such models, due to their complexity, require high computational time and nowadays it is not possible to integrate them in an optimization problem. The identification of simplified models synthesizing the relationship between the precursor emissions and the pollutant concentrations is therefore required. In the literature source-receptor relationships have been described by isopleths (Shih et al., 1998) or by reduced form models such as (i) simplified photochemical models, adopting semi-empirical relations estimated on experimental data (Venkatram, Karamchandani, Pai, & Goldstein, 1994), and (ii) statistical models, identified processing the results of complex 3D chemical transport models (Friedrich & Reis, 2000; Guariso et al., 2004; Ryoike, Nakamori, Heyes, Makowski, & Schopp, 2000; Carnevale, Finzi, Pisoni, & Volta, 2009).

The proposed IAM solves a multi-objective (air quality, internal and external costs) optimization problem to select effective abatement strategies. Artificial neural networks, identified processing long-term 3D deterministic multi-phase modelling system simulation outputs, describe the nonlinear relations between the control variables (precursor emissions reduction) and the air quality index (AQI), defining the air quality objective. The decision variables are technical and non-technical abatement measures. The external costs assess the damage due to population pollution exposure.

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## DEMONSTRATION CHARACTER

The project itself is born with the idea to expand a prototypal tool (RIAT – Regional Integrated Assessment Tool) and its first application in a specific Italian region (Lombardy) actually on-going to build a new extended tool (i.e. RIAT+) with the aim to make it usable by all European Regions to produce local air quality planning guidelines and optimized action plan.

Some actions are implemented to reach this scope:

- application in two different regions, Emilia Romagna (another Italian region to make a first national generalization of RIAT+ application) and Alsace (a French region) with an international modelling and tool application domain (including Germany, Switzerland beyond France), guarantying the test of European extension of RIAT+ application.
- moreover the external endorsement of JRC - owner of RIAT intellectual property - will help in maintaining this international approach of the project
- RIAT+ will be a "native" multi-language tool
- during RIAT+ design and development, especially during and after prototype phase, opening to other regions both through web and conferences will be promoted; RIAT+ testing version will be published on the web and could be downloaded by registered regions.
- after LIFE communication plan foresees formation course, assistance to tool use, web updating ...

## EU ADDED VALUE OF THE PROJECT AND ITS ACTIONS

Although the integrated assessment methodology described in this proposal focuses on two specific regional areas in Europe (Emilia Romagna (I) and Alsace (F)), its general scope is at the EU scale. The selected regional areas are different in terms of environmental concerns (local vs transboundary pollution, meteorological conditions...) and belong to countries where differences might occur in the prioritisation and choice of air quality policies. Although this diversity of approaches might increase the level of complexity it is seen as a necessary step to generalize the methodology and allow its future potential application to any region in the EU.

Regional policies are not always consistent with actions taken at the EU or national scale. This may arise from inconsistencies due to the spatial scale of interest and to the level of detail characterizing the available information at this particular scale. One main objective of the proposed methodology is to ensure consistency across scales in terms of input data (emissions, abatement technology, costs...).

The proposed approach may be used at different sub-national spatial scales and/or for regions including different countries. This approach will ensure that neighbouring areas plan actions which are consistent among them and lead to an overall improvement of the air quality conditions in the area.

Achieving the EU air quality targets is important in terms of human health protection. This is why integrated and cost-effective policies at the local scale must remain consistent with those decided at the EU and national scales. The proposed methodology focuses on these consistency aspects.

In conclusion the project should be considered local for its specific application but European for its methodology and benefits.

### **EFFORTS FOR REDUCING THE PROJECT'S "CARBON FOOTPRINT"**

During the project production or analytical method with the significant production of CO<sub>2</sub> are not provided, neither infrastructure realizations are foreseen..

RIAT+ will compute CO<sub>2</sub> emission reductions linked to pollutant emission abatement optimized actions so that policy makers could choose planning scenarios where carbon footprint of the plan itself is reduced.

In order to reduce the project's "carbon footprint" the following actions will be performed:

- most of the activities will be supported by web tools (web sharing of the documents...)
- for internal communications, activities video-conference (e.g. skype) will be preferred to frequent operational meetings
- in case of meetings, when it is possible, will be preferred travel by train, or at least through car pooling.
- the use of prints and of paperwork will be reduced to the maximum or at least using recycled paper for internal and project report and when possible for communication products
- the use of e-mail will be preferred for the realization of invitations to the intermediate, final and scientific conferences.

**STAKEHOLDERS INVOLVED AND MAIN TARGET AUDIENCE OF THE PROJECT (OTHER THAN PROJECT PARTICIPANTS)**

Actions and plans implementation for Air Quality need the partnership with local and national administrations. For this reason it is absolutely necessary to continuously involve during the project both the administrations at the regional level (Emilia-Romagna and Alsace regions) and at the European level (JRC). They will constitute an advising and guiding panel to the project (see the attached letters of interests). The project and its outcome are directed to a specific audience represented by both technical and political persons/groups involved in air quality management and policies on a regional/local level.

**EXPECTED CONSTRAINTS AND RISKS RELATED TO THE PROJECT IMPLEMENTATION  
AND HOW THEY WILL BE DEALT WITH (CONTINGENCY PLANNING)**

One of the key actions of the OPERA project are the software architecture design and software implementation reviewing and generalizing the existing RIAT tool.

The RIAT is the main deliverable of a service contract (Ref: 384364) awarded by the JRC-IES of the European Commission to University of Brescia (partner of this LIFE+ proposal).

RIAT Project is expected to finish in July 2010, as it is currently within the time schedule. JRC as a member of the proposed Steering Committee and its involvement as a stakeholder in P1, I1, I2 and C2 will guarantee that RIAT+ development and distribution will be coherent with IES technical and scientific aims. At the point when RIAT is finished, the JRC will hold officially the intellectual rights. Given the high interest of the project for JRC activities (see Annex B), JRC has already expressed interest in the re-use of RIAT in the OPERA project. The agreement with the Opera Consortium is going to be specified by the JRC legal service.

In the data collection phases (P2 & P3) some information might be sensitive or difficult to obtain (e.g. non technical measures...). In this project a close collaboration with stakeholders such as the regional Authorities will facilitate the good completion of these phases.

## CONTINUATION AND VALORISATION OF THE PROJECT RESULTS AFTER THE END OF THE PROJECT

- Which actions will have to be carried out or continued after the end of the project?

Actions to be carried out after the end of the project will principally be devoted to advertise and promote the RIAT+ software and its associated methodology and to provide a continuous technical support and training to new and experienced users. Actions will also be taken to ensure and steer future developments of the RIAT+ software and generalization of its applications to other EU regions.

- How will this be achieved, what resources will be necessary to carry out these actions?

Advertising and promotion of the RIAT+ and associated methodology will be achieved through active participation from the partners of this Consortium in integrated assessment networks and related conferences. Applications of the methodology to new regions will be presented in these conferences to inform a general audience about the benefit of this type of approach.

Regular workshops for RIAT+ users will be organized by the Consortium with the objectives to:

- 1) ensure communication among users,
- 2) inform new users about the tool capabilities and
- 3) maintain a consistent updating process of the tool.

Through a website interface a continuous support to the users will be guaranteed. The transfer of know-how through this web support will also benefit the RIAT+ in terms of future developments.

The progressive increase of the number of users is seen as an opportunity to obtain new funding for future applications and developments.

- To what extent will the results and lessons of the project be actively disseminated after the end of the project to those persons and/or organisations that could best make use of them (please identify these persons/organisations)?

Through the distribution of brochures and the information presented in conferences the Consortium will make sure that contacts are taken with the persons/organizations that could best make use of the methodology. These persons/organizations are mostly the Air quality agencies and Regional administrations responsible for the elaboration of air quality plans and of their assessment. The participation of some of these organizations in this proposal will facilitate the future dissemination of the tool and methodology to other similar entities.



***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part C – detailed technical description  
of the proposed actions**

**Important note:**

- All calculations and detailed cost breakdowns necessary to justify the cost of each action should be included in the financial forms F. In order to avoid repeating the financial information (with the risk of introducing incoherencies), Part C should only contain financial information not contained in the financial forms.
- All forms in this section may be duplicated, so as to include all essential information.
- Any action that is sub-contracted should be just as clearly described as an action that will be directly carried out by the beneficiaries.

## DETAILS OF PROPOSED ACTIONS

### **Action P1: Review of existing plans and methodologies, identification of RIAT+ requirements**

#### *Description:*

The goal of this action is to provide a set of requirements to further develop the RIAT system and interface it in a consistent way with already available tools and modules to support the development of regional policies aimed at delivering cost-effective and efficient solutions for problems such as the improvement of ambient air quality and global climate change. Inconsistencies and potential gaps in the current methodologies will be identified and solutions to resolve these issues will be proposed. In particular the consistency of the information used at different spatial and temporal scales (from Europe to regional) will be a focus. Guidelines will be delivered to set-up the proposed RIAT+ system and to help the Regional Authorities to make the best use of the system.

#### *Methods employed:*

The action is subdivided in the following tasks:

1. Review of the current methodologies used for air-quality / Global change assessment in the Emilia-Romagna (NINFA system) and the Alsace (AtmoRhénA system) areas with the aim to identify the improvements to be made to link efficiently those systems with the RIAT tool within the RIAT+ system. Particular attention will be given to the I/O requirements of each module.
2. Review of the current methodologies used for air-quality / Global change assessment at the European (e.g. RAINS/GAINS-Europe) and national scales (e.g. RAINS-Italy) with the aim of designing an efficient flow of information from the larger spatial scales to the RIAT+. Particular attention will be given to the potential inconsistencies that could arise from the level of details used at different spatial scales (e.g. in the definition of the emission inventory or emission projections...).
3. Review of the current methodologies used to include structural, behavioural and other non-technical emission abatement measures in integrated assessment systems. Identification of the required steps necessary to fully incorporate those aspects into the RIAT+ system.
4. Review of the abatement synergies and trade offs related to air quality and climate change as used in the current approaches and identification of the required steps necessary to incorporate those aspects into the RIAT+.
5. Identification and classification of the required RIAT+ input data into importance classes. Proposition of a methodology to run the RIAT+ even in the case of scarce data availability.

The first 4 subtasks will provide deliverables at starting phase of the project whereas the 5<sup>th</sup> task will take place during the development phase of the RIAT+.

#### *Beneficiary responsible for implementation:*

The review subtasks of this action will be coordinated by ARPA-ER through direct consultation with the other partners of the project.

#### *Expected results (quantitative information when possible):*

Deliverables will be guideline reports to build the RIAT+ and guideline reports to efficiently use the RIAT+.

#### *Indicators of progress:*

- Review report about the state of the art of European, national and local IAMs
- RIAT+ requirements report
- Progress Reports

## **ACTION P2: Data collection in Emilia Romagna**

### *Description (what, how, where and when):*

The goal of this preparatory action is to collect all the data needed to apply the "RIAT+ tool" to the Emilia-Romagna Region (see action I3). The needed data will be organized by the standard tool used to prepare the local emission inventory (based on INEMAR database) and by the operational air quality modeling system NINFA-E. The methodology of "Emission inventory" is bottom up giving a local (municipality) scale result. During the action P2 the completeness of the emission inventory will be tested and missing information will be collected. The action will be performed during the first year of the project.

### *Methods employed:*

The emissions of pollutants in the atmosphere will be calculated according to CORINAIR prescriptions and the impact on emissions of technological measures will be estimated according to GAINS/RAINS methodology. To evaluate the impact of non-technological measures, the available techniques will be reviewed and evaluated. The sub actions that will be performed are:

P2.1 Setup of simulation modelling multiphase; collection and preparation of the input data to the modelling system (emissions, meteorological fields, initial and boundary conditions ... )

P2.2 Collection of data relating to technological and non-technological measures

P2.3 Collection of data describing the penetration rate of the above mentioned measures in Emilia Romagna

### *Constraints and assumptions:*

Some sensitive data will be difficult to obtain (e.g. non-technical measures). A methodology will be set up (Action P1 point 5) to compensate the possible lack of data.

### *Beneficiary responsible for implementation:*

This action will be coordinated by ARPA-ER through direct consultation with UNIBS.

### *Expected results (quantitative information when possible):*

- Input data set for RIAT+ and NINFA-E systems

### *Indicators of progress:*

- Report describing the datasets
- Progress Reports

### **ACTION P3: Data collection in Alsace**

#### *Description (what, how, where and when):*

The goal of this preparatory action is to collect all the data needed to apply the RIAT+ tool to the Alsace Region (see action I4). The needed data will be organized by the standard tool used to prepare the local emission inventory (based on the "Emiss'Air" database) and by the operational air quality modeling system "AtmoRhénA". The methodology of "Emission inventory" is bottom up giving a local (municipality) scale result. During the action P3 the completeness of the emission inventory will be tested and missing information will be collected. The action will be performed during the first year of the project.

#### *Methods employed:*

The emissions of pollutants in the atmosphere will be calculated according to CORINAIR prescriptions and the impact on emissions of technological measures will be estimated according to GAINS/RAINS methodology. To evaluate the impact of non-technological measures, the available techniques will be reviewed and evaluated. The sub actions that will be performed are:

P3.1 Setup of simulation modeling multiphase; collection and preparation of the input data to the modelling system (emissions, weather, initial and boundary conditions ...)

P3.2 Collection of data relating to technological and non-technological measures

P3.3 Collection of data describing the penetration rate of the above mentioned measures in Alsace.

#### *Constraints and assumptions:*

Some sensitive data will be difficult to obtain (e.g. non-technical measures). A methodology will be set up (Action P1 point 5) to compensate the possible lack of data.

#### *Beneficiary responsible for implementation:*

This action will be coordinated by CNRS through direct consultation with UNIBS.

#### *Expected results (quantitative information when possible):*

- Input data set for RIAT+ and AtmoRhénA systems

#### *Indicators of progress:*

- Report describing the datasets
- Progress Reports

## **ACTION I1: RIAT+ methods and design**

### *Description*

The goal of this action is to design the RIAT+ system, harmonizing the RIAT integrated assessment models with the requirements identified in Action P1 (Requirements analysis, existing plans, methods and tools).

The proposed IAM implements and solves a multi-objective problem aimed to select effective policies to control the primary and secondary pollutants population exposure. The methodology is focused on the local and regional scale to better interpret the peculiar features of the domain.

A non-linear optimization algorithm is used to solve the multi-objective model defining the set of the effective emission abatement measures (the Pareto boundary). Each effective solution is described in terms of prioritizing abatement measure sectors, penetration rate of reduction measures, internal (due to abatement measures implementation) and external (due to population exposure) costs, air quality improvements. The system can perform the same analysis for a specific emission reduction scenario designed by the user.

Two different multi-objective problems can be formalized:

1. The comprehensive problem formulation (detailed approach) assumes as decision variables the emission reduction percentage for each available reduction measure.
2. A simplified problem can be formalized assuming as decision variables the common reduction percentages for groups of activities (lumped approach), for example the CORINAIR sectors.

In both cases, the problem can be solved for different areas of the domain.

The following air quality indexes will be assessed by the system according to the geographical areas considered: O<sub>3</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> yearly mean concentration and SOMO35 for ozone. The relationships between the decision variables (precursor emission reductions) and the air quality index are simulated by source-receptor models (neural networks) identified processing the long term simulations of a chemical transport model.

The internal costs (associated to emission reduction policies) are calculated identifying the link between the technology efficiency, the reduction unit cost and the emission reduction. In the detailed approach all the emission activities and reduction measures are explicitly considered and the internal cost corresponds to the sum of emission reduction measure costs.

If the decision variables are the reductions of sector emissions (lumped approach), a cost function is identified for each precursor-sector pair, processing the abatement measure database.

For a defined emission reduction policy and the consequent exposure scenario, the external costs due to the population morbidity and mortality are assessed following the EU Externe methodology.

### *Methods employed:*

The action is subdivided in the following tasks:

1. Upgrade of RIAT integrated assessment models to include requirements identified by action P1
  - GHG emission reduction assessment
  - cost constraints
  - non-technical measures
  - external costs
  - local government guidelines
  - integration with European and national levels: algorithms to assess CLE and MFR emission projections.
  - integration with regional instruments: budget constraints, source-receptor models design
2. Upgrade of the RIAT architecture:
  - Definition of new input database:
    - regional databases (emissions, technological and non technological measures, budget constraints, linked GHG emissions reductions, local government guidelines),
    - national databases (CLE and MFR scenarios).
3. Assessment of a new methodology even in the case of scarce data availability.

The methodology will be presented to two scientific congresses to guarantee an independent review.

*Constraints and assumptions:*

Availability of RIAT+ requirements (action P1).

*Beneficiary responsible for implementation:*

This action will be coordinated by UNIBS through direct consultation with TERRARIA.

*Expected results (quantitative information when possible):*

- RIAT+ IAM formalization
- I/O Database structure definition
- RIAT+ architecture

*Indicators of progress:*

- technical guidelines
- Progress Reports

## ACTION I2 – RIAT+ software implementation

### *Description:*

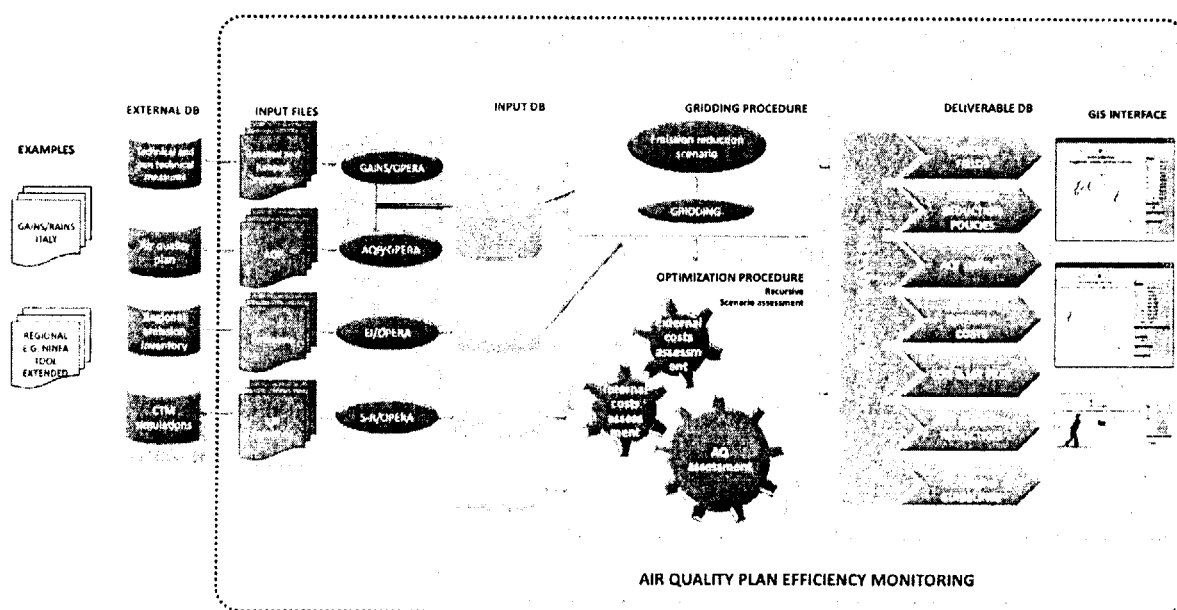
This action is the one focused in realizing the RIAT+ tool. The software architecture and computation method and algorithms and subsequent software implementation will completely review and generalize RIAT tool (a first application in Lombardy) in an European perspective following P1 requirements and I1 procedures and methods, and I3, I4 applications suggestions.

RIAT+ will be a multi-language DSS (Decision Support System) with a stand-alone architecture using open-source methodologies. RIAT+ will be developed with J2SE platform (java 2 standard edition) for Microsoft Windows operating system (even though in principle a multiplatform application i.e. Linux version will be easily prepared); main software are:

- FORTRAN developing language for data processing;
- MATLAB routines for optimization procedures and S/R neuro and neuro-fuzzy functions estimate;
- MySQL as database environment
- GIS interface based on open-source platform (e.g. Google Earth)

Moreover than European approach some fundamental changes will be included:

- inclusion and definition of non technological measures,
- budget constraints,
- linked GHG emissions reductions
- local government guidelines
- efficiency planning index



The system as evidenced in the scheme consists of:

- Two main external interfaces: at the top level "boundary conditions" defined by European/national policies as implemented in GAINS/RAINS ITALY (in the case of Italian regions), at the regional level input/output links to RAQMS regional air quality modeling system (e.g. Ninfa extended for Emilia Romagna), including emission inventory, air quality model and air quality plan
- Three input databases (emission, measure - technological or not technological) their abatement capacity and costs, S/R functions)
- Three procedures (emission processing, optimization, output formatting)
- Seven output databases (emission, measure, AQI, cost, log/lst files, GHG emission reduction and local air planning guidelines). Annex A shows examples for Air Quality Index (Figure 1), optimal policies (Figure 2), emission reduction measures (Figure 3), internal costs (Figure 4)

RIAT+ will be designed following "WIZARD" approach with a series of GUI (graphical user interface) helping the user to follow a guided. A GIS (geographical information system) will help the user in visualizing regional/local output (e.g. emissions reductions, AQI ...).

RIAT+ will be designed to be modular (each process, interface or database could be substituted), user friendliness, efficiency (helping the user to find the best way to find a good solution in reasonable time), open-source approach.

At the end of the project RIAT+ will be freely shared, copied, distributed and transmitted under the condition of "Attribution", "Noncommercial" and "No Derivative Works" (i.e. Creative Commons licensing).

*Methods employed:*

- 12.1- implementation RIAT+ architecture
- 12.2- Integration with european level: the system should link to existing European and national (respectively GAINS and RAINS-Italy in the case of Italian application) assessment systems which will define the boundary condition policies
- 12.3- Integration with regional instruments: the system should link to existing regional air quality modeling system;
- 12.4- RIAT+ implementation of existing or ad new databases and 12.5- RIAT+ implementation of existing or ad hoc methodology to include non technological measures, budget constraints, linked GHG emissions reductions, local government guidelines, planning index, monitoring of the efficiency of air quality plan
- 12.6- RIAT+ test, bug fixing and final release

*Constraints and assumption:*

DSS (decision support system) demanding target is to get correctly the requirements by the final user - technicians and politician involved in air quality planning at a regional level . A strict stakeholders involvement should be guaranteed

*Beneficiary responsible for implementation:*

This action will be coordinated by TERRARIA through direct consultation with UNIBS.

*Expected results (quantitative information when possible):*

- RIAT+ Beta version
- RIAT+ final version

*Indicators of progress:*

- User guide
- Installation kit

### **ACTION I3: - RIAT+ application to Emilia Romagna (IT) region**

#### *Description (what, how, where and when):*

The "RIAT+" methodology and tools will be applied to prepare a demonstrative action plan to reduce air pollution in the Emilia-Romagna region (Italy).

The plan will include a list of actions that can be taken at local level to improve air quality. The action list will include standard technical actions, already considered by European and national tools (e.g. GAINS and GAINS Italy), and non technical actions, as they are defined by local authorities. The more effective set of actions to reduce air pollution and minimizing the costs will be defined by RIAT+ tool. The action will be performed during the second and third year of the project.

Currently in Emilia-Romagna Region, each Province, which is in charge of air quality management as stated by regional law 36/1989, has already approved a Provincial Air Quality Plan.

The use of RIAT+ will support the Region to proceed with an integration of the provinces with the regional and national level. In fact, the integrated assessment of the benefits from individual plans will help to evaluate the synergy and to coordinate the prioritization of the technologies and "non-technical" measures to be implemented. This integration plays a fundamental role in the Padana Plain where the basin dimension of the air quality problem requires policies at least at an inter-regional scale.

RIAT+ tool will support the definition and the effectiveness evaluation of a set of measures to be carried out throughout the region that should then become the shared air quality action plan to be deliberated and implemented by regional and provincial institutions.

A review process of results is carried out annually by the regional and province administrations.

The action will be fulfilled according to the stakeholder requirements that will be agreed within the Steering Committee.

The stakeholders will be involved in:

- the definition of the system requirements,
- the ways of representing their own planning strategies and the RIAT+ outputs
- the assessment of the results, if the tests should be considered successful or if they need more tuning.

Two meetings are planned to prepare the action plans to the stakeholders.

One course will be organized for the end-user to introduce the methods adopted and show how to work with the tool in practice. The course will be structured in 5 sections: emissions, reduction measures, source-receptor modelling, optimization and RIAT+ tool training

#### *Methods employed:*

The "RIAT+" will be interfaced with the well consolidated numerical models system NINFA (ARPA-ER). NINFA is composed of a Chemical Transport Model (Chimere) driven by a meteorological limited area model (COSMO-I) and a local emission inventory (INEMAR). Such modelling system is running daily to predict and assess air quality in the northern Italy and Emilia-Romagna region considering local meteorology and emissions. The sub actions that will be performed are:

- I3.1 - NINFA simulations of several emissions scenarios
- I3.2 - Identifying the source-receptor models
- I3.3 - Identification of the system constraints
- I3.4 - Solution of multi-objective problem
- I3.5 - Assessment of multi-objective solution
- I3.6 - Evaluation in terms of CO2 emissions reductions of the efficient policies defined in I3.4

#### *Constraints and assumptions:*

It is assumed that the I1 (RIAT+ methods and design) and I2 (RIAT+ software implementation) are completed before the start of action I3.4. To limit the impact of this constraint, a good interaction between developing teams and users is planned in the project.

#### *Beneficiary responsible for implementation:*

This action will be coordinated by ARPA-ER through direct consultation with UNIBS and TERRARIA.

*Expected results (quantitative information when possible):*

- Simulations by NINFA system
- source-receptor models
- efficient reduction policies (list of actions, associated costs, effectiveness in reducing air pollution at different time horizons)

*Indicators of progress:*

- Report describing the demonstrative action plan to reduce air pollution in the Emilia-Romagna region (Italy).
- Progress Reports

## **ACTION I4: - RIAT+ application to Alsace (FR) region**

### *Description (what, how, where and when):*

The "RIAT+" methodology and tools will be applied to prepare a demonstrative action plan to reduce air pollution in the Alsace region (France). The plan will include a list of actions that can be taken at local level to improve air quality. The action list will include standard technical actions, already considered by European and national tools, and non technical actions, as they are defined by local authorities. The more effective set of actions to reduce air pollution and minimizing the costs will be defined by RIAT+ tools. The action will be performed during the second and third year of the project.

In Alsace, different plans implemented are derived from national regulations.

First, the law concerning air pollution and the efficient use of energy has defined the air quality regional plan and the atmospheric protection plan for the main urban areas. Those plans are updated with a five years frequency.

Second, the national climate plan has defined territorial climate plans, managed by the regional collectivities.

Last, the future law for the environmental transition (currently assessed by the parliament) will require dealing both with air quality and climate change in a new regional scheme.

RIAT+ is an important opportunity in the framework of that new scheme.

Different action plans are currently implemented throughout the Alsace Region. One is concerning the whole region (regional plan for climate and air quality, managed with a five years period by the Regional Council, in cooperation with the decentralized state in the region). A special plan concerns the Strasbourg area and the field of air quality, in order to be consistent with the European 2008/50/CE directive (managed with a five years period by the decentralized state). Additional plans (about 10 in Alsace managed by the regional council) are dealing with climate change, at urban or rural scales. Those plans need to implement a set of emissions reduction measures, which have to be assessed. The reduction measures are decided and implemented by local authorities who have, in cooperation with regional stakeholders, to provide lot of basic data to quantify their effectiveness: road traffic, energy in buildings for example. Those data will be compiled inside RIAT+ tool in order to define the most cost-effective scenarios.

The action will be fulfilled according to the stakeholder requirements that will be agreed within the Steering Committee.

The stakeholders will be involved in:

- the definition of the system requirements,
- the ways of representing their own planning strategies and the RIAT+ outputs
- the assessment of the results, if the tests should be considered successful or if they need more tuning.

Two meetings are planned to prepare the action plans to the stakeholders.

One course will be organized for the end-user to introduce the methods adopted and show how to work with the tool in practice. The course will be structured in 5 sections: emissions, reduction measures, source-receptor modelling, optimization and RIAT+ tool training

### *Methods employed:*

The "RIAT+" decision support system will be interfaced with the well consolidated numerical models system "AtmoRhénA". "AtmoRhénA" is composed of a Chemical Transport Model (Chimere) driven by a meteorological limited area model (MM5) and a local emission inventory ("Emiss'Air"). Such modelling system is running daily to predict and assess air quality over the Alsace region considering local meteorology and emissions. The sub actions that will be performed are:

- I4.1- "Emiss'Air" simulations of several emissions scenarios
- I4.2- Identifying the source-receptor models
- I4.3- Identification of constraints
- I4.4- Solution of multi-objective problem
- I4.5 Assessment of multi-objective solution
- I4.6- Evaluation in terms of CO2 emissions reductions of the efficient policies defined in I4.4

ASPA will produce "Emiss'Air" simulations of several emissions scenarios (I4.1) and participate to the tasks I4.2-I4.6 using the "AtmoRhénA" system. This is not a straightforward operation and requires the work of experts, that will mainly be by the post-doc researchers.

*Constraints and assumptions:*

It is assumed that the I1 (RIAT+ methods and design) and I2 (RIAT+ software implementation) are completed before the start of action I3.4. To limit the impact of this constraint, a good interaction between developing teams and users is planned in the project.

*Beneficiary responsible for implementation:*

This action will be coordinated by CNRS through direct consultation with UNIBS and TERRARIA.

*Expected results (quantitative information when possible):*

- Simulations by AtmoRhénA system
- source-receptor models
- efficient reduction policies (list of actions, associated costs, effectiveness in reducing air pollution at different time horizons)

*Indicators of progress:*

- Report describing the demonstrative action plan to reduce air pollution in the Alsace region (France).
- Progress Reports

## **ACTION C1: During project communication**

### *Description:*

Communication activities are designed to promote and disseminate the project and RIAT + tool to a specific audience represented by technical and political actors/stakeholders involved in air quality management and policies on a regional/local level. For this reason, different methods of dissemination described below will be used:

- Project brochure: leaflets containing a brief description of the project of its principal aims, the partners, the contacts and the addresses where to find more details
- Project website: where to find updated information and methodological and scientific material on the project and IT tools for RIAT + (online after six months from the beginning of the project). The website will be continuously updated containing the last RIAT + release - at least two will be published and "supported": the "Beta" version (the intermediate one) and 1.0 version (the final one) at the linked IT material: installation kit, user guide, test case, FAQ on the use of the tool, regional application results ...
- Project conferences: after each of the two main releases of the tool (Beta and 1.0 version) and for the second one after regional applications, a conference will be organized, the first (after Beta version) will be held in Bologna, the second (after 1.0 version and regional results of RIAT + tool) in Strasbourg. Mainly after the first two applications in Emilia Romagna and Alsace an intense divulgation and scientific "accreditation" of the tool will be performed. Besides a scientific conference is expected in Ispra. The target of this conference is technical personnel.

As communication instruments two more ones will be realized at the end of the project:

- Layman's report
- Information panels
- Scientific conference participation: participation to NIAM (Network for Integrated Assessment Modeling) and UNECE-TFIAM workshops to present scientific project results.
- Mailing list to provide both technical and general information for interested people

### *Methods employed:*

- Project website: Website will be open access with an authenticated section for the preliminary regional data and software release. It will be mainly devoted to explain RIAT+ tool its objective and technical-scientific bases, after a first version will be released all support will be published (user guide, FAQ with frequently asked question on how to use new-RIAT...) and the scientific support and explanation of the different part will available (emission inventory, air quality modeling, S/R function, technical and non technical measures, optimization ...), and for the results of Italian and French regional cases (respectively Emilia Romagna and Alsace); a specific space will be devoted to enter into contact with the project coordinator to ask to collaborate to the developing and testing of RIAT+.
- Project conferences: the first conference will be held in Bologna at about the half of the project (20<sup>th</sup> month since the beginning) and it will be mainly devoted to discuss about the first prototype of the tool, its scientific base and methods and its future development, so it will mainly addressed to internal partner or other regions showing interest in testing the tool, an "Italian/French" audience is expected in a number of 50 guests so that open and "multilateral" discussion could be held with focus groups on the different parts of the project (similar to website scientific/technical sections). Final conference will take place in Strasbourg at about the end of the project (36<sup>th</sup> month), with the aim to present the final tool and its first regional applications, it will be addressed to wide range of European regional policy makers and decision support technicians in the field of air quality, an audience of 200 guests is expected.
- As an example of support material:

- "user guide" is essentially a book-length (100-150 pages) document containing instructions on installing, using, or troubleshooting RIAT+; beyond of pdf version on the website, it will be printed in 100 hard copies.
- brochure will be one leaflet printed both sides in three languages (English, Italian and French) in total 1000 hard copies and describing in few words the project/ RIAT + its partners and aims giving the address where to access more information
- Layman's report is a sort of extended brochure in 8 pages printed in three languages and 300 hard copies
- this documents will be partnered by the realization of ten information panels positioned in strategic locations (JRC, Emilia Romagna and Alsace Region and other interest regions), the overall result to be reached is to get the attention and the credit of regional stakeholders involved in air quality planning both technicians and politicians.

*Constraints and assumption:*

Main constraint of this action is to combine good communication both to scientific community and politic audience. The Consortium composition (scientific and public entities) will ensure that this aspect will be accounted for.

*Beneficiary responsible for implementation:*

This action will be coordinated by TERRARIA through direct consultation with all the partners.

*Expected results (quantitative information when possible):*

The evaluation of the success of this communication task is more qualitative than quantitative since the target is a very specific one, anyway:

- 2.000 website accesses during one year in the second part of the project when some results and material are available;
- 50 and 100 persons attending the two conferences
- 10 European regions showing interest in the RIAT+

*Indicators of progress:*

- Realization of the website with the timing set and continuous updates
- Delivery of a report on the organization and participation in conferences
- Progress Reports

## **Action C2: After LIFE communication**

The goal of this action is to advertise and promote the use of the RIAT+, provide technical support to its users and steer future developments through a series of courses, workshops and publications. This action may be subdivided into the following sub-tasks:

- The user's manual and installation instruction described in Action C1 will be updated regularly to account for user's feedback and for on-going developments and improvements. A FAQ list will be maintained.
- Courses will be organized on a yearly basis to provide new users with a general presentation of the RIAT+ as well as with a detailed description of specific applications of the system. The users will be trained to use the RIAT+ with data corresponding to their specific regional area and constraints.
- Workshops will be organized on a yearly basis to share information and experience and to inform about new developments. RIAT+ users will be invited to present their application highlighting the main results and suggesting possible changes/improvements to the system. The main outcome of each workshop will be compiled in a EUR technical report.
- Promotion of the RIAT+ will be facilitated by the creation of a brochure highlighting the main features and benefits of the system. These brochures will be widely distributed.
- The RIAT+ and its continuous development will be presented at a series of seminars and conferences throughout the world. In particular the NIAM network and the UNECE-TFIAM will constitute the ideal forums where this information will be presented.
- scientific paper submissions and publications

It is expected that the formation of new users and the sharing of information through a continuous series of workshops will contribute to a broad distribution and use of the RIAT+.

### *Constraints and assumption:*

One constraint of this action is lack of funding but it is expected that the number of users will increase and lead to new funding opportunities.

### *Beneficiary responsible for implementation:*

This action will be coordinated by ARPA through direct consultation with all the partners.

### *Expected results (quantitative information when possible):*

- RIAT+ presentation at conferences
- Brochure
- Permanent framework to share information and experiences among users.

### *Indicators of progress:*

- Number of RIAT+ users

## ACTION M1: Project Management

### *Description:*

The objective of this action is to ensure that the project is proceeding according to the plan, objectives and milestones. A particular attention will be paid for the co-ordination among the participants and all the tasks described. It will be the responsibility of the partner managers to ensure that their staff complete the task(s) assigned to them by the agreed delivery date.

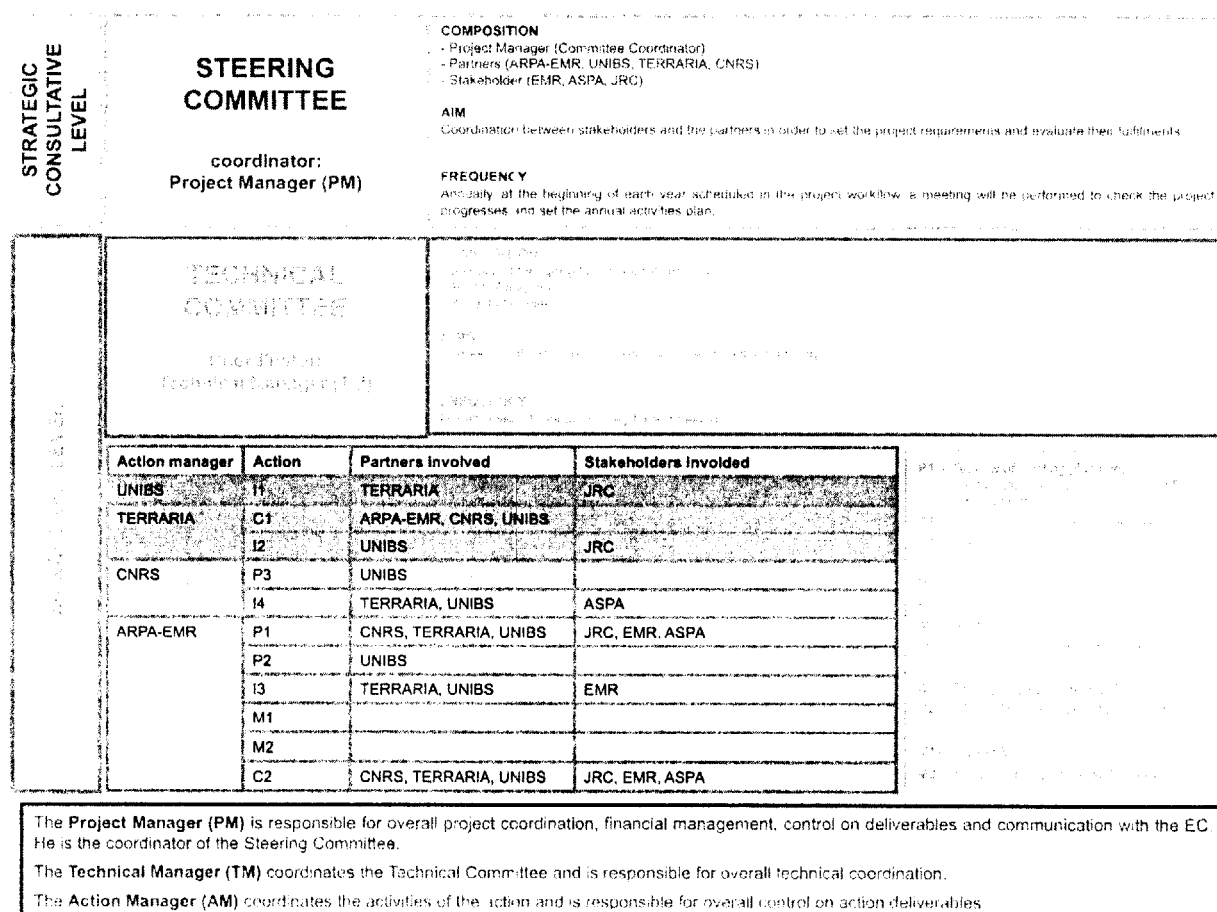
### *Methods employed:*

A two levels management will be established. The first one is the STRATEGIC CONSULTATIVE LEVEL aiming to (1) the coordination between stakeholders (see in ANNEX B the letters of interest from Regione Emilia Romagna, ASPA, IES-JRC) and the partners in order to set the project requirements and evaluate their fulfilments and to (2) the general management, under the responsibility of the Project Manager.

The second one is the OPERATIONAL LEVEL addressing all the technical issues with the correct scheduling.

The following bodies (see the figure below) are foreseen:

- Project Manager
- Steering Committee
- Technical manager
- Technical Committee
- Action Manager



The **Project Manager (PM)** is responsible for overall project coordination, financial management, control on deliverables and communication with the EC (including the non technical reports). He is the coordinator of the Steering Committee. In case of conflicting opinions or problems he has the responsibility of taking final decisions after discussion with all partners during a specific Steering Committee meeting. Responsible for this action is dott. Eriberto de'Munari, Arpa Emilia-Romagna, who is the referring person for all the contacts.

Under his direct coordination there is also an administrative staff who supports the coordinator for administrative reporting and task.

The **Steering Committee (SC)** verifies the fulfilment and the quality of the project and of its deliverable; stimulates and shares hints from the stakeholders, guarantees cooperation and communication between stockholders and sharing experiences among partners. At the beginning of each year a meeting will be scheduled in the project workflow, to check the project progresses and set the annual activities plan.

SC is composed of:

- Project Coordinator
- Stakeholders:
  - Dr. Eugenio Lanzi, Responsible of the "Air, acoustic and electromagnetic pollution management area", Regione Emilia-Romagna (EMR).
  - Dr. Emanuel Riviere, Responsible of the Studies on air quality for the Association pour la Surveillance et l'étude de la Pollution atmosphérique en Alsace (ASPA).
  - Dr. Philippe Thunis, Join Research Centre - Institute for Environment and Sustainability (JRC-IES).
- Partners (a representative for each partner will be decided during the first meeting of the Steering Committee):
  - Arpa Emilia-Romagna (Arpa-EMR),
  - Università di Brescia (UNIBS),
  - TerrAria,
  - Centre national de la recherche scientifique (CNRS).

The **Technical Manager (TM)** is responsible for overall technical coordination, time table realization, control on deliverables timing and contents from the Action Managers. In case of conflicting opinions or problems he supports the partner for choosing the final decisions after discussion with all the Action Managers. In case of necessity he could call for a TC in order to address all the problems. Responsible for this action is dott. Marco Deserti, Arpa Emilia-Romagna.

The **Technical Committee (TC)** The Participants at the TC are one member from every partner plus the Project Coordinator:

|                                |                        |
|--------------------------------|------------------------|
| Arpa Emilia-Romagna (ARPA-ER): | dott. Marco Deserti    |
| Università di Brescia (UNIBS): | prof. Marialuisa Volta |
| Terraria s.r.l.                | dott. Giuseppe Maffei  |
| CNRS:                          | prof. Nadege Blond     |

The **Action Manager (AM)** is responsible for overall action coordination and control on deliverables.

*Constraints and assumptions:*  
none

*Beneficiary responsible for implementation:*  
ARPA-ER (PC/CT)

*Expected results (quantitative information when possible):*

1. Organise the project, subproject and supervisory board.
2. Organise initial working meeting to discuss the state of the art of ash recycling and to produce a definitive project plan.
3. Run the project according to the project plan.
4. Evaluation and economic audition by external observer
5. Administer changes when necessary.

*Indicators of progress:*

1. Technical and financial reports to EU
2. Milestones reached
3. Objectives reached

## **ACTION M2: Monitoring project's effectiveness**

### *Description:*

The action aim is to constantly check the effectiveness of the project by using of the Technical Committee tool. Any gap from the scheduled timetable or change from the detailed planning should be addressed here. The TC should operate in close coordination with the Steering Committee and the Project Manager that has the responsibility of maintaining the communication with EU.

### *Methods employed:*

The action progresses will be reported in progress reports delivered at the end of each Technical Committee meeting (every 4 months) to both Steering and Technical committee members. During TC meetings, every Action Manager should expose the action timing with particular detail about the sub-actions involved, changes from scheduled assumptions or new proposals to be approved by the committee. The Steering Committee, that includes stakeholders, will evaluate yearly the progress reports and provide consequent decisions to guarantee timeliness and effectiveness of the project. In case of difficulty to complete a sub-action by the agreed date, the Action Manager will inform all the sub actions actuators as soon as the delay can be foreseen especially if the delay of a sub-action has implications for the completion of the entire action, in which case all the actions managers, the involved parties, have to be informed. If a delay has implications for other actions, the Action Manager will bring the issue to the TM and the PM, who will take steps to bring the project back on line calling for a TC summit. If the project is delayed as a result of delays in actions or conflicts among project members, the PM will call for a SC meeting and will inform the EC to present a plan for how the problem will be dealt with.

### *Constraints and assumptions:* none

### *Beneficiary responsible for implementation:* ARPA Emilia-Romagna (CO/TC)

### *Expected results (quantitative information when possible):*

1. Shared project developing
2. Tight timetable
3. Problem solving approach

### *Indicators of progress:*

1. Number of PTC summit.
2. No delayed Timetable
3. During the SC meetings, the effectiveness and the progress of the main actions will be measured both in terms of time scheduling and by means of the results of a questionnaire filled by stakeholders and partners.

**DELIVERABLE PRODUCTS OF THE PROJECT**

| Name of the Deliverable                     | Code of the associated action | Deadline |
|---------------------------------------------|-------------------------------|----------|
| RIAT+ requirements                          | P1                            | KO+9     |
| Emilia Romagna preparatory data             | P2                            | KO+12    |
| Alsace preparatory data                     | P3                            | KO+12    |
| Methodology and technical guide             | I1                            | KO+24    |
| Emilia Romagna RIAT+ input                  | I3                            | KO+24    |
| Alsace RIAT+ input                          | I4                            | KO+24    |
| RIAT+ prototype                             | I2                            | KO+20    |
| RIAT+ final version and user guide          | I2                            | KO+36    |
| Emilia Romagna action plan built with RIAT+ | I3                            | KO+36    |
| Alsace action plan built with RIAT+         | I4                            | KO+36    |
| Web site                                    | C1                            | KO+6     |
| RIAT+ (Beta version) Workshop               | C1                            | KO+20    |
| RIAT+ (1.0 version) Workshop                | C1                            | KO+36    |
| Scientific Workshop                         | C1                            | KO+35    |
| Layman's report                             | C1                            | KO+36    |
| Informative panels                          | C1                            | KO+36    |
| After LIFE+ plan                            | C2                            | KO+36    |

**MILESTONES OF THE PROJECT**

| Name of the Milestone                   | Code of the associated action | Deadline |
|-----------------------------------------|-------------------------------|----------|
| RIAT+ requirements                      | P1                            | KO+9     |
| RIAT+ preparatory data                  | P2/P3                         | KO+12    |
| RIAT+ methodology                       | I1                            | KO+24    |
| RIAT+ input data                        | I3/I4                         | KO+24    |
| RIAT+ Beta release                      | I2                            | KO+20    |
| Emilia Romagna/Alsace RIAT+ Action Plan | I3/I4                         | KO+36    |
| RIAT+ final release                     | I2                            | KO+36    |

**ACTIVITY REPORTS FORESEEN**

Please indicate the deadlines for the following reports:

- Inception Report (to be delivered within 9 months after the project start),
- Progress Reports n°1, n°2 etc. (if any; to ensure that the delay between consecutive reports does not exceed 18 months);
- Mid-term Report with payment request (only for project longer than 24 months)

- Final Report with payment request

| Type of report                      | Deadline       |
|-------------------------------------|----------------|
| Inception Report (after P1 action)  | KO+9           |
| Progress Reports (action progress)  | Every 4 months |
| Mid-term Report (RIAT Beta release) | KO+24          |
| Final Report                        | KO+36          |

## TIMETABLE

List all actions ordered by number and using their numbers or names. Tick as appropriate.  
(Remember that projects cannot start prior to the date of the signature of the grant agreement)

[illegible]



***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part D – Output indicator forms**

**Important note:**

- The purpose of the D forms is to collect information for statistical purposes only (for the evaluation of the achievements of a project the EC will use the information contained in forms A, B and C). However, applicants should ensure that the information entered in the D forms corresponds as far as possible to the project outputs defined in proposal forms A, B and C.
- The forms in this section may not be duplicated.

## LIFE+ Environmental Policy and Governance output indicators

### OUTPUTS

#### Part 1 - Preparatory actions

Table 1

| Types of preparatory actions            | No. | Budgeted cost (€) |
|-----------------------------------------|-----|-------------------|
| Feasibility studies                     |     |                   |
| Legislative reviews                     |     |                   |
| Cost-benefit studies                    |     |                   |
| Market analysis                         |     |                   |
| Permit studies                          |     |                   |
| Permit applications                     |     |                   |
| Permits obtained                        |     |                   |
| Environmental impact assessment studies |     |                   |
| Scientific studies                      |     |                   |
| Detailed engineering studies            |     |                   |
| Monitoring actions                      |     |                   |
| Action plans                            |     |                   |
| Management plans                        |     |                   |
| Inventories & Studies                   | 2   | € 215.720         |
| <i>Ex ante</i> environmental monitoring |     |                   |
| <i>Ex post</i> environmental monitoring |     |                   |
| Other: RIAT+ requirements               | 1   | € 125.585         |
| Total budgeted cost (€)                 |     | € 341.305         |

**OUTPUTS****Part 2 - Concrete actions***Table 2 - Main project deliverables (project implementation phase)*

| Deliverable                                                         | No. | Budgeted cost (€) |
|---------------------------------------------------------------------|-----|-------------------|
| Prototypes                                                          |     |                   |
| Pilot plants                                                        |     |                   |
| Techniques/Methodologies developed                                  | 1   | € 163.995         |
| Software                                                            | 1   | € 273.675         |
| Successful implementation of demonstration actions                  | 2   | € 787.626         |
| Monitoring techniques developed                                     |     |                   |
| Monitoring performed                                                |     |                   |
| Guidelines: (costs included in Technique/methodologies development) | 1   |                   |
| Manuals (costs included in Software)                                | 1   |                   |
| Others (please specify)                                             |     |                   |
| Total budgeted cost (€)                                             |     | €1.225.296        |

*Table 3 - Training activities*

| No. of training sessions | Total no. of persons trained | Budgeted cost (€) |
|--------------------------|------------------------------|-------------------|
| 1                        | 50                           | €15.000           |
| 3                        | 15                           | -                 |

**OUTPUTS****Part 3 – Awareness-raising  
and communication***Table 4 – Workshops, seminars  
and conferences*

| Target audience:           | General public     |          |                      | Specialised audience (e.g. decision-makers) |          |                      | Very specialised audience (e.g. experts, academics) |          |                      |
|----------------------------|--------------------|----------|----------------------|---------------------------------------------|----------|----------------------|-----------------------------------------------------|----------|----------------------|
|                            | Local/<br>Regional | National | EU/<br>International | Local/<br>Regional                          | National | EU/<br>International | Local/<br>Regional                                  | National | EU/<br>International |
| Number of participants:    |                    |          |                      |                                             |          |                      |                                                     |          |                      |
| 0-25 participants          |                    |          |                      |                                             |          |                      |                                                     |          |                      |
| 25-75 participants         |                    |          |                      |                                             |          |                      |                                                     |          | 1                    |
| 75-100 participants        |                    |          |                      |                                             | 2        | 1                    |                                                     |          |                      |
| More than 100 participants |                    |          |                      |                                             |          |                      |                                                     |          |                      |
| Total budgeted cost (€)    |                    |          |                      |                                             | €30 000  | €20 000              |                                                     |          | €20 000              |

# LIFE+ Environment Policy and Governance 2009- D4

Table 5 - Media and other communication and dissemination work

| Type of media                                         | No.     |
|-------------------------------------------------------|---------|
| Project website: average number of visitors per month | 100     |
| Press releases made by the project                    |         |
| General public article in national press              |         |
| General public article in local press                 |         |
| Specialised press article                             | 9       |
| Internet article                                      | 12      |
| TV news/reportage                                     |         |
| Radio news/reportage                                  |         |
| Film produced                                         |         |
| Film played on TV                                     |         |
| Film presented in events/festivals                    |         |
| Exhibitions attended                                  |         |
| Information centre/Information kiosk                  |         |
| Project notice boards                                 | 12      |
| Other - web support to RIAT+ users                    | -       |
| Total budgeted cost (€)                               | €84,000 |

Table 6 - Publications

| Type of publication     | No. published | No. of copies | Languages                         |
|-------------------------|---------------|---------------|-----------------------------------|
| Layman's report         | 1             | 200           | Italian/English<br>French/English |
| Manuals                 | 1             | 150           | Italian<br>French<br>English      |
| Leaflets                | 1             | 1000          | Italian<br>French<br>English      |
| Brochures               |               |               |                                   |
| Posters                 | 1             | 10            | Italian<br>French<br>English      |
| Books                   |               |               |                                   |
| Technical publications  |               |               |                                   |
| Other (please specify)  |               |               |                                   |
| Total budgeted cost (€) | €85.920       |               |                                   |

Table 7 - Educational activities

| Establishment involved          | No. of students |
|---------------------------------|-----------------|
| Kindergartens/Primary schools   |                 |
| Secondary schools               |                 |
| Higher education establishments |                 |
| Total budgeted cost (€)         |                 |

# ANNEX - A

## ANNEX A

### OPERA output examples

Final OPERA outputs are the effective reduction measures, the consequent emission scenarios, the optimized air quality indexes, the internal and external costs.

#### Emission scenarios

Emission scenarios are calculated starting from a base case (i.e. current emissions), and applying a set of emission reduction measures.

#### Air Quality Indexes

The Air Quality Indexes are calculated starting from reduced precursor emissions and using the identified source-receptor models. The source-receptor models differ for each cell and are able to reproduce the requested indexes. An example of Air Quality Index computed applying the proposed methodology is shown in Figure 1 (see details in the paper [1])

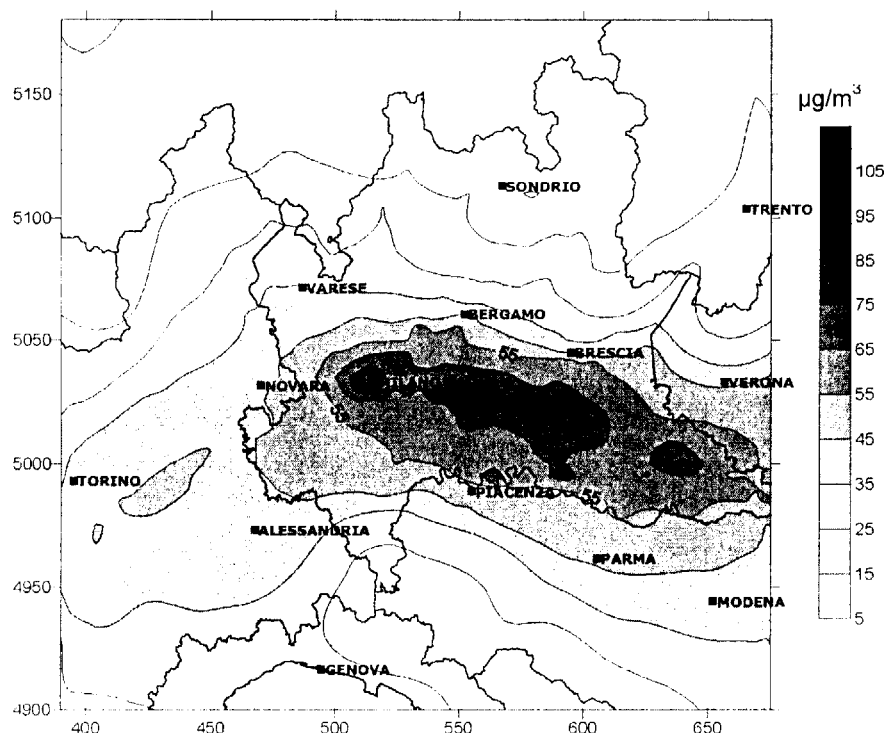


Figure 1: PM mean annual concentration ( $\mu\text{g}/\text{m}^3$ ) over Lombardy Region estimated by means of source-receptor models.

#### Reduction measures

The optimal solutions of the multi-objective problem are represented by a curve in the plain of the objectives (the Pareto boundary, see details in [2]) indicating the optimal compromise between the objective themselves. For instance, Figure 2 shows the optimal solutions for Lombardy Region in terms of internal costs (x-axis) and Air Quality Index (y-axis). What is of relevant interest for the decision-makers of this curve is that it clearly shows the feasible results, that can be achieved. Considering again the example in Figure 2 in the region at hand, there is no way to reduce the average PM concentration below  $24.5 \mu\text{g}/\text{m}^3$  and there is no reason to invest more than 1200 M€ in this operation.

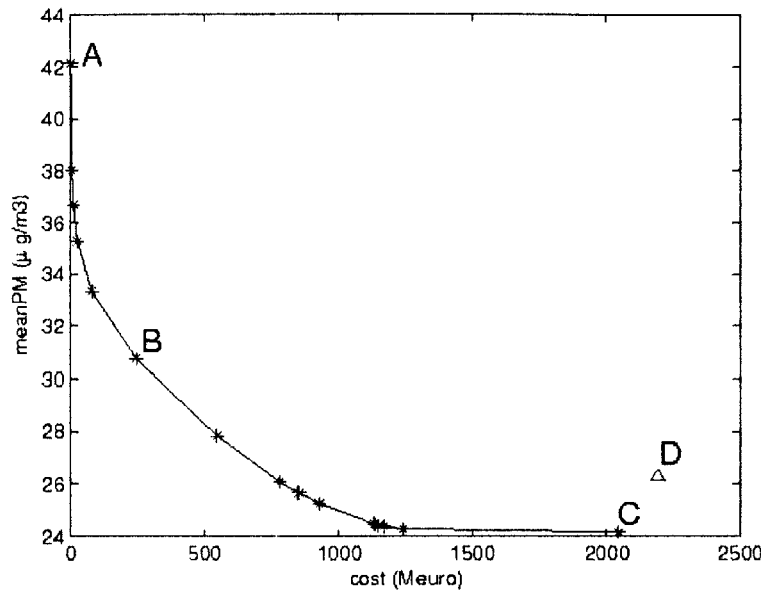


Figure 2: The set of optimal compromise solutions for the minimization of internal costs and PM10 mean concentration in Lombardy Region.

Each point of the curve above corresponds to the implementation of a mix of emission reduction technologies and thus to a certain total emission of each CORINAIR sector. Again as an example, Figure 3 shows the optimal sectorial emission of primary PM, for total emission reduction costs ranging from 0 (point A) to the to 2050 M€ (point C).

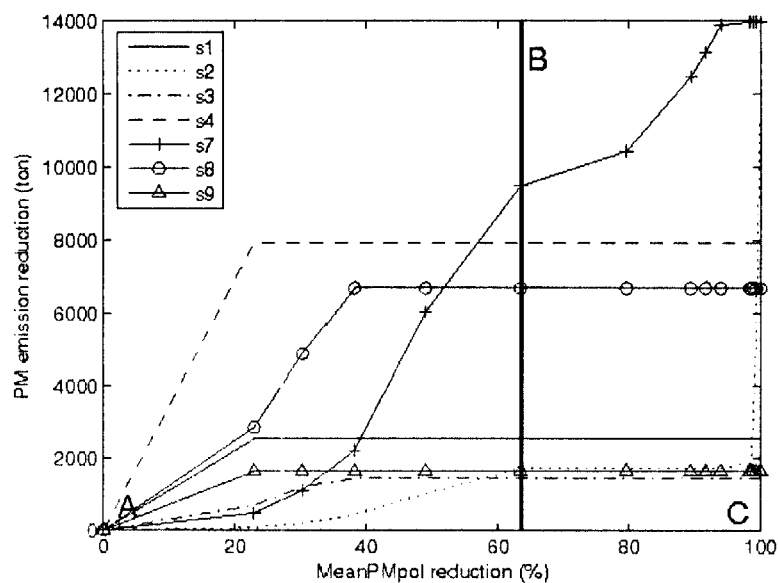


Figure 3: Least costly PM10 emission reduction, for each CORINAIR sector corresponding to optimal solutions above.

### Internal and external costs

The proposed OPERA methodology deals with external and internal costs (see details in [3]).

The external costs are estimated following the well-known ExterneE methodology as in several other EU projects (see [www.externe.info](http://www.externe.info)). The internal costs are calculated using data related to reduction measure unit cost, efficiency, and current degree of implementation.

The total cost of a particular emission reduction scenario is obtained as the sum of the cost of application of the considered individual reduction technologies at the specific degree required by that particular scenario.

An example of internal costs for a set of efficient measures is shown in Figure 4.

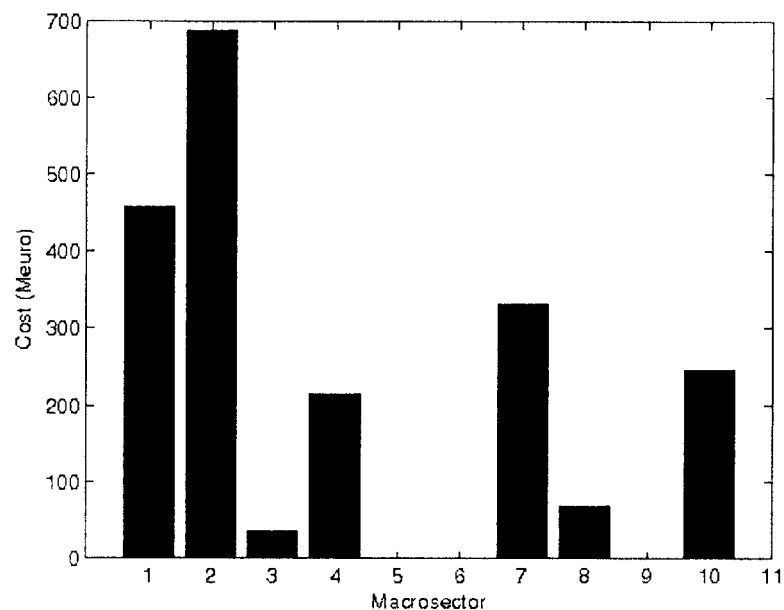
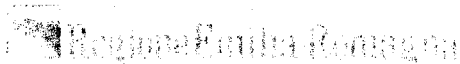


Figure 4: Cost per CORINAIR sector, needed to implement scenario C in Figure 2.

## References

- [1] CARNEVALE C, FINZI G, PISONI E., VOLTA M (2009). Neuro-fuzzy and neural network systems for air quality control. *ATMOSPHERIC ENVIRONMENT*, vol. 43; p. 4811-4821, ISSN: 1352-2310, doi: 10.1016/j.atmosenv.2008.07.064
- [2] PISONI E., CARNEVALE C, VOLTA M (2009). Multi-criteria analysis for PM10 planning, *ATMOSPHERIC ENVIRONMENT*, vol. 43; p. 4833-4842, ISSN: 1352-2310, doi: 10.1016/j.atmosenv.2008.07.049
- [3] PISONI E., VOLTA M (2009). Modeling Pareto Efficient PM10 control policies in Northern Italy to reduce health effects. *ATMOSPHERIC ENVIRONMENT*, vol. 43; p. 3243-3248, ISSN: 1352-2310, doi: 10.1016/j.atmosenv.2009.03.031

# ANNEX - B



SERVIZIO RISANAMENTO ATMOSFERICO, ACUSTICO, ELETTROMAGNETICO

IL RESPONSABILE

**EUGENIO LANZI**

REGIONE EMILIA-ROMAGNA: GIUNTA

PG.2009, 0199513

del 10/09/2009



Alla c.a. Dott Stefano Tibaldi  
Direttore Generale  
Arpa Emilia-Romagna  
Via Po, 5  
40139 Bologna

|                         |
|-------------------------|
| DECLARATION OF INTEREST |
|-------------------------|

Official name: Regione Emilia-Romagna  
Contact person: Dott. Eugenio Lanzi  
Address: VIA DEI MILLE, 21 - 40121 BOLOGNA  
Phone: 051 5276942  
e-mail: [elanzi@regione.emilia-romagna.it](mailto:elanzi@regione.emilia-romagna.it)  
web-site: <http://www.regione.emilia-romagna.it/>

With great pleasure I, the undersigned Dott. Eugenio Lanzi, Manager of Servizio Risanamento Atmosferico, Acustico, Elettromagnetico of Regione Emilia-Romagna, would like to endorse the Life+ Proposal "An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions" with "OPERA - Operational Procedure for Emission Reduction Assessment" acronym.

All work done by Arpa Emilia-Romagna in developing specific tools to support the local Air Quality Plans, is already well known here in Italy and is especially helpful in Regione Emilia-Romagna, so I'm pleased to learn that you are participating at the OPERA Project in order to develop a further step of these tools to support local policies.

It seems that all the partners involved and the approach you set, strictly connected with National and European guidelines, would be a guarantee of developing an affordable and powerful tool that, at the end, will let us have a more flexible, performing and integrated approach in defining local Air Quality Plans.

The project could be a strategic opportunity to share experiences and goals outside the Italian context and to make an effective contribution to the achievement of European air quality targets, by applying the OPERA methodology to support local Air Quality Plans all over the European territory.

So this proposal has my full recommendation without reserve. We are forward to the start of this important collaboration and to share its benefits with the other partners and supporters.

  
Dott Eugenio Lanzi

Schiltigheim, 14th of september, 2009

N/Réf. : RD09.1255

Contact person :  
Emmanuel RIVIERE  
03 88 19 26 64  
eriviere@atmo-alsace.net  
www.atmo-alsace.net

Objet : **Declaration of interest**

ASPA is very interested to participate to the project « An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions ». ASPA has always been involved into European INTERREG programs in cooperation with our german and swiss colleagues on the upper Rhine valley. In the frame of those programs we have developed a common information and forecasting system Atmo\_rhenA ([www.atmo-rhenA.net](http://www.atmo-rhenA.net)). That tool is used by local authorities in order to assess measures for air quality improvement. In the same time we have considered the effect of measures on greenhouse gas emissions. Atmo-rhenA has been developed in cooperation with some laboratories. In particular the CHIMERE model has been developed by the French research center CNRS and is now applied in many French regions. It is for us a strategic opportunity to use that tool to go one step further to evaluate the most adapted actions plan in order to improve air quality and to decrease global warming and the related costs on Alsace Region. So ASPA is part in the proposal without any restriction and will be fully involved in cooperation with the other partners.

De l'Atmo



Alain TARGET



**EUROPEAN COMMISSION**  
JOINT RESEARCH CENTRE  
Institute for Environment and Sustainability  
The Institute Director

Ispira, 14 September 2009  
D(2009)

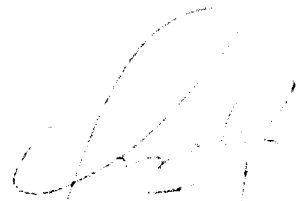
**Subject: JRC-IES participation in the LIFE+ proposal "OPERA"**

**To the Members of the LIFE+ "OPERA" proposal Consortium**

The Joint Research Centre (JRC) of the European Commission is legally not allowed to participate as beneficiary partner of a Consortium in a LIFE+ call for proposals. As the Director of the JRC Institute for Environment and Sustainability I wish to express our strong interest in your LIFE+ proposal "OPERA". This proposal aims at the further development and generalization of an integrated assessment methodology which we currently develop in the frame of a collaboration agreement with the Lombardy Region in Italy.

The proposed work within "OPERA" will allow us to broaden the scope of our integrated assessment methodology. Furthermore the proposed activities will enable us to test and verify our methodology also in other European regions, thus giving a broader European dimension to our work in this field.

Air quality and climate change integrated assessment modeling is and will remain one of our research key areas in the forthcoming years. We therefore welcome the initiative taken by the consortium in the proposed "OPERA" project, and should the proposal be successful, we will be keen to provide advice and assistance to the members of this Consortium where necessary.



Leendert Hordijk



**LIFE +**

***Nature and Biodiversity  
Environmental Policy and Governance  
Information and Communication***

## **FINANCIAL APPLICATION FORMS**

**Proposal acronym: OPERA**

**NOTES:**

Please refer to guidelines for applicants when filling in this form

**FORM FA****Proposal acronym: OPERA**

| Budget breakdown categories        | Total cost in €  | Eligible Cost in € | % of total eligible costs |
|------------------------------------|------------------|--------------------|---------------------------|
| 1. Personnel                       |                  | 1 619 414          | 70.85%                    |
| 2. Travel and subsistence          |                  | 73 080             | 3.20%                     |
| 3. External assistance             |                  | 419 000            | 18.33%                    |
| 4. Durable goods                   |                  |                    |                           |
| Infrastructure                     | 0                | 0                  | 0.00%                     |
| Equipment                          | 30 895           | 15 448             | 0.68%                     |
| Prototype                          | 0                | 0                  | 0.00%                     |
| 5. Land purchase / long-term lease |                  | 0                  | 0.00%                     |
| 6. Consumables                     |                  | 8 350              | 0.37%                     |
| 7. Other Costs                     |                  | 1 200              | 0.05%                     |
| 8. Overheads                       |                  | 149 071            | 6.52%                     |
| <b>TOTAL</b>                       | <b>2 301 010</b> | <b>2 285 562</b>   | <b>100%</b>               |

| Contribution breakdown                  | In €             | % of TOTAL     | % total eligible costs |
|-----------------------------------------|------------------|----------------|------------------------|
| Requested Community contribution        | 1 089 544        | 47.35%         | 47.67%                 |
| Coordinating Beneficiary's contribution | 405 831          | 17.64%         |                        |
| Associated Beneficiaries' contribution  | 805 635          | 35.01%         |                        |
| Co-financers contribution               | 0                | 0.00%          |                        |
| <b>TOTAL</b>                            | <b>2 301 010</b> | <b>100.00%</b> |                        |

Please fill in the forms FC to F7 first. In these forms you are allowed to add lines but you cannot alter the formulae. In this form you are only requested to fill in the amount of the overheads

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

Important note: If the overheads cell appears in red, this means that the budgeted amount is above the maximum permitted 7% of the total eligible direct costs excluding land purchase and the overhead costs themselves.

### Breakdown of costs for Actions in Euro (excluding overhead costs)

| Action number                                            | Short name of action                                                                      | 1.<br>Personnel | 2.<br>Travel and subsistence | 3.<br>External assistance | 4.a<br>Infrastructure | 4.b<br>Equipment | 4.c<br>Prototype | 5.<br>Purchase or lease of land | 6.<br>Consumables | 7.<br>Other costs | TOTAL     |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------|------------------------------|---------------------------|-----------------------|------------------|------------------|---------------------------------|-------------------|-------------------|-----------|
| P1/P1A+ + requirements                                   | P1 - Review of existing plans and methodologies; identification of P1/P1A+ + requirements | 97 635          | 2 950                        | 25 000                    |                       |                  |                  |                                 |                   |                   | 125 585   |
| P2/P2 – Data collection: Emilia Romagna (It) application | P2/P2 – Data collection: Emilia Romagna (It) application                                  | 70 536          | 1 650                        | 48 000                    |                       |                  |                  |                                 |                   |                   | 120 186   |
| P3/P3 - Data collection Alsace (Fr) application          | P3/P3 - Data collection Alsace (Fr) application                                           | 44 134          | 1 400                        | 50 000                    |                       |                  |                  |                                 |                   |                   | 95 534    |
| I1/I1 – RIA/T+ methods and design                        | I1/I1 – RIA/T+ methods and design                                                         | 136 585         | 11 210                       | 15 000                    |                       |                  |                  |                                 |                   | 1 200             | 163 995   |
| I2/I2 – RIA/T+ software implementation                   | I2/I2 – RIA/T+ software implementation                                                    | 216 200         | 3 980                        | 40 000                    |                       | 13 495           |                  |                                 |                   |                   | 273 675   |
| I3/I3 - RIA/T+ application to Emilia Romagna (IT) region | I3/I3 - RIA/T+ application to Emilia Romagna (IT) region                                  | 267 300         | 7 210                        | 131 000                   |                       |                  |                  |                                 |                   |                   | 405 510   |
| I4/I4 - RIA/T+ application to the Alsace (FR) region     | I4/I4 - RIA/T+ application to the Alsace (FR) region                                      | 319 316         | 10 400                       | 45 000                    |                       | 17 400           |                  |                                 |                   |                   | 392 116   |
| C1/C1 - During project communication                     | C1/C1 - During project communication                                                      | 182 520         | 19 050                       | 25 000                    |                       |                  |                  |                                 | 8 350             |                   | 234 920   |
| M1/M1 : Project Management                               | M1/M1 : Project Management                                                                | 218 438         | 15 230                       | 40 000                    |                       |                  |                  |                                 |                   |                   | 273 668   |
| M2/M2 - Monitoring project's effectiveness               | M2/M2 - Monitoring project's effectiveness                                                | 66 750          |                              |                           |                       |                  |                  |                                 |                   |                   | 66 750    |
|                                                          |                                                                                           |                 |                              |                           |                       |                  |                  |                                 |                   |                   | 0         |
|                                                          |                                                                                           |                 |                              |                           |                       |                  |                  |                                 |                   |                   | 0         |
|                                                          |                                                                                           |                 |                              |                           |                       |                  |                  |                                 |                   |                   | 0         |
|                                                          |                                                                                           |                 |                              |                           |                       |                  |                  |                                 |                   |                   | 0         |
| TOTAL                                                    | TOTAL                                                                                     | 1 619 414       | 73 080                       | 419 000                   | 0                     | 30 895           | 0                | 0                               | 8 350             | 1 200             | 2 151 939 |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

**FORM FC**

Proposal acronym: OPERA

**Coordinating Beneficiary's contribution**

| Country code | Beneficiary n° | Beneficiary short name | Total costs of the actions in € | Beneficiary's own contribution in € | Amount of EC contribution requested in € |
|--------------|----------------|------------------------|---------------------------------|-------------------------------------|------------------------------------------|
| IT           | 1              | ARPA-ER                | 713 116                         | 405 831                             | 307 285                                  |

**Associated Beneficiaries' contribution**

| Country code | Beneficiary n° | Beneficiary short name | Total costs of the actions in € | Associated beneficiary's own contribution in € | Amount of EC contribution requested in € |
|--------------|----------------|------------------------|---------------------------------|------------------------------------------------|------------------------------------------|
| IT           | 2              | UNIBS                  | 573 445                         | 287 232                                        | 286 213                                  |
| IT           | 3              | TA                     | 577 962                         | 294 379                                        | 283 583                                  |
| FR           | 4              | CNRS                   | 436 487                         | 224 024                                        | 212 463                                  |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
|              |                |                        |                                 |                                                |                                          |
| <b>TOTAL</b> |                |                        | <b>1 587 894</b>                | <b>805 635</b>                                 | <b>782 259</b>                           |

**Co-financers contribution**

| Co-financer's name | Amount of co-financing in € |
|--------------------|-----------------------------|
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
|                    |                             |
| <b>TOTAL</b>       | <b>0</b>                    |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

FORM F1

Proposal acronym: OPERA

Direct Personnel costs

| Beneficiary number | Action number | Type of contract    | Category/Role in the project | Calculation => | A                                     | B                     | C = B/Productive days per month | A X B                  | % of total direct personnel costs for the project |
|--------------------|---------------|---------------------|------------------------------|----------------|---------------------------------------|-----------------------|---------------------------------|------------------------|---------------------------------------------------|
|                    |               |                     |                              |                | Daily rate (rounded to the nearest €) | Number of person-days | Number of person-months         | Direct personnel costs |                                                   |
| 1 P1               | 1 P1          | permanent/full time | senior technician            |                | 186                                   | 120                   | 6.6                             | 22 320                 | 1.38%                                             |
| 1 P1               | 1 P1          | permanent/full time | manager                      |                | 445                                   | 38                    | 2.1                             | 16 910                 | 1.04%                                             |
| 1 P2               | 1 P2          | permanent/full time | senior technician            |                | 186                                   | 161                   | 8.9                             | 29 946                 | 1.85%                                             |
| 1 I3               | 1 I3          | permanent/full time | manager                      |                | 445                                   | 100                   | 5.5                             | 44 500                 | 2.75%                                             |
| 1 I3               | 1 I3          | permanent/full time | senior technician            |                | 186                                   | 550                   | 30.3                            | 102 300                | 6.32%                                             |
| 1 M1               | 1 M1          | permanent/full time | manager                      |                | 445                                   | 100                   | 5.5                             | 44 500                 | 2.75%                                             |
| 1 M1               | 1 M1          | permanent/full time | senior technician            |                | 186                                   | 100                   | 5.5                             | 18 600                 | 1.15%                                             |
| 1 M1               | 1 M1          | permanent/full time | administrative manager       |                | 242                                   | 41                    | 2.3                             | 9 922                  | 0.61%                                             |
| 1 M1               | 1 M1          | temporary/full time | administrative staff         |                | 116                                   | 470                   | 25.9                            | 54 520                 | 3.37%                                             |
| 1 M1               | 1 M1          | permanent/full time | administrative staff         |                | 118                                   | 102                   | 5.6                             | 12 036                 | 0.74%                                             |
| 1 M2               | 1 M2          | permanent/full time | manager                      |                | 445                                   | 150                   | 8.3                             | 66 750                 | 4.12%                                             |
| 1 C1               | 1 C1          | permanent/full time | manager                      |                | 445                                   | 30                    | 1.7                             | 13 350                 | 0.82%                                             |
| 1 C1               | 1 C1          | permanent/full time | senior technician            |                | 186                                   | 90                    | 5.0                             | 16 740                 | 1.03%                                             |
| 2 P1               | 2 P1          | permanent/full time | full professor               |                | 570                                   | 15                    | 0.8                             | 8 550                  | 0.53%                                             |
| 2 P1               | 2 P1          | permanent/full time | associate professor          |                | 322                                   | 30                    | 1.7                             | 9 660                  | 0.60%                                             |
| 2 P1               | 2 P1          | permanent/full time | researcher                   |                | 208                                   | 20                    | 1.1                             | 4 160                  | 0.26%                                             |
| 2 P1               | 2 P1          | temporary/full time | researcher                   |                | 208                                   | 20                    | 1.1                             | 4 160                  | 0.26%                                             |
| 2 P2               | 2 P2          | permanent/full time | full professor               |                | 570                                   | 5                     | 0.3                             | 2 850                  | 0.18%                                             |
| 2 P2               | 2 P2          | permanent/full time | associate professor          |                | 322                                   | 30                    | 1.7                             | 9 660                  | 0.60%                                             |
| 2 P2               | 2 P2          | permanent/full time | researcher                   |                | 208                                   | 35                    | 2.0                             | 7 280                  | 0.45%                                             |

## FORM F1

Proposal acronym: OPERA

## Direct Personnel costs

| Beneficiary number | Action number | Type of contract    | Category/Role in the project | Calculation => | A<br>Daily rate<br>(rounded to the<br>nearest €) | B<br>Number of<br>person-days | C = B/Productive days<br>per month<br>Number of<br>person-months | A X B<br>Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
|--------------------|---------------|---------------------|------------------------------|----------------|--------------------------------------------------|-------------------------------|------------------------------------------------------------------|------------------------------------|---------------------------------------------------------|
| 2 P2               |               | temporary/full time | researcher                   |                | 208                                              | 100                           | 5.6                                                              | 20 800                             | 1.28%                                                   |
| 2 P3               |               | permanent/full time | full professor               |                | 570                                              | 5                             | 0.3                                                              | 2 850                              | 0.18%                                                   |
| 2 P3               |               | permanent/full time | associate professor          |                | 322                                              | 20                            | 1.1                                                              | 6 440                              | 0.40%                                                   |
| 2 P3               |               | permanent/full time | researcher                   |                | 208                                              | 20                            | 1.1                                                              | 4 160                              | 0.26%                                                   |
| 2 P3               |               | temporary/full time | researcher                   |                | 208                                              | 60                            | 3.3                                                              | 12 480                             | 0.77%                                                   |
| 2 I1               |               | permanent/full time | full professor               |                | 570                                              | 40                            | 2.2                                                              | 22 800                             | 1.41%                                                   |
| 2 I1               |               | permanent/full time | associate professor          |                | 322                                              | 75                            | 4.2                                                              | 24 150                             | 1.49%                                                   |
| 2 I1               |               | permanent/full time | researcher                   |                | 208                                              | 45                            | 2.5                                                              | 9 360                              | 0.58%                                                   |
| 2 I1               |               | temporary/full time | researcher                   |                | 208                                              | 50                            | 2.8                                                              | 10 400                             | 0.64%                                                   |
| 2 I2               |               | permanent/full time | full professor               |                | 570                                              | 10                            | 0.6                                                              | 5 700                              | 0.35%                                                   |
| 2 I2               |               | permanent/full time | associate professor          |                | 322                                              | 40                            | 2.2                                                              | 12 880                             | 0.80%                                                   |
| 2 I2               |               | permanent/full time | researcher                   |                | 208                                              | 40                            | 2.2                                                              | 8 320                              | 0.51%                                                   |
| 2 I2               |               | temporary/full time | researcher                   |                | 208                                              | 100                           | 5.6                                                              | 20 800                             | 1.28%                                                   |
| 2 I3               |               | permanent/full time | full professor               |                | 570                                              | 10                            | 0.6                                                              | 5 700                              | 0.35%                                                   |
| 2 I3               |               | permanent/full time | associate professor          |                | 322                                              | 70                            | 3.9                                                              | 22 540                             | 1.39%                                                   |
| 2 I3               |               | permanent/full time | researcher                   |                | 208                                              | 70                            | 3.9                                                              | 14 560                             | 0.90%                                                   |
| 2 I3               |               | temporary/full time | researcher                   |                | 208                                              | 150                           | 8.4                                                              | 31 200                             | 1.93%                                                   |
| 2 I4               |               | permanent/full time | full professor               |                | 570                                              | 10                            | 0.6                                                              | 5 700                              | 0.35%                                                   |
| 2 I4               |               | permanent/full time | associate professor          |                | 322                                              | 70                            | 3.9                                                              | 22 540                             | 1.39%                                                   |
| 2 I4               |               | permanent/full time | researcher                   |                | 208                                              | 70                            | 3.9                                                              | 14 560                             | 0.90%                                                   |

FORM F1

Proposal acronym: OPERA

Direct Personnel costs

| Beneficiary number | Action number | Type of contract            | Category/Role in the project | Calculation => | A                                     | B                     | C = B/Productive days per month | A X B                  | % of total direct personnel costs for the project |
|--------------------|---------------|-----------------------------|------------------------------|----------------|---------------------------------------|-----------------------|---------------------------------|------------------------|---------------------------------------------------|
|                    |               |                             |                              |                | Daily rate (rounded to the nearest €) | Number of person-days | Number of person-months         | Direct personnel costs |                                                   |
| 2 I4               |               | temporary/full time         | researcher                   |                | 208                                   | 150                   | 8.4                             | 31 200                 | 1.93%                                             |
| 2 C1               |               | permanent/full time         | full professor               |                | 570                                   | 35                    | 2.0                             | 19 950                 | 1.23%                                             |
| 2 C1               |               | permanent/full time         | associate professor          |                | 322                                   | 45                    | 2.5                             | 14 490                 | 0.89%                                             |
| 2 C1               |               | permanent/full time         | researcher                   |                | 208                                   | 35                    | 2.0                             | 7 280                  | 0.45%                                             |
| 2 C1               |               | temporary/full time         | researcher                   |                | 208                                   | 90                    | 5.0                             | 18 720                 | 1.16%                                             |
| 2 M1               |               | permanent/full time         | full professor               |                | 570                                   | 15                    | 0.8                             | 8 550                  | 0.53%                                             |
| 2 M1               |               | permanent/full time         | associate professor          |                | 322                                   | 15                    | 0.8                             | 4 830                  | 0.30%                                             |
| 2 M1               |               | permanent/full time         | researcher                   |                | 208                                   | 10                    | 0.6                             | 2 080                  | 0.13%                                             |
| 2 M1               |               | temporary/full time         | researcher                   |                | 208                                   | 30                    | 1.7                             | 6 240                  | 0.39%                                             |
| 3 P1               |               | permanent/full time         | programmer/technician        |                | 150                                   |                       | 0.0                             | 0                      | 0.00%                                             |
| 3 P1               |               | permanent/full time         | analyst                      |                | 250                                   | 60                    | 3.3                             | 15 000                 | 0.93%                                             |
| 3 P1               |               | individual service contract | consultant                   |                | 225                                   | 25                    | 1.4                             | 5 625                  | 0.35%                                             |
| 3 P1               |               | individual service contract | senior consultant            |                | 450                                   | 25                    | 1.4                             | 11 250                 | 0.69%                                             |
| 3 I1               |               | permanent/full time         | programmer/technician        |                | 150                                   | 100                   | 5.5                             | 15 000                 | 0.93%                                             |
| 3 I1               |               | permanent/full time         | analyst                      |                | 250                                   | 80                    | 4.4                             | 20 000                 | 1.24%                                             |
| 3 I1               |               | individual service contract | consultant                   |                | 225                                   | 75                    | 4.1                             | 16 875                 | 1.04%                                             |
| 3 I1               |               | individual service contract | senior consultant            |                | 450                                   | 40                    | 2.2                             | 18 000                 | 1.11%                                             |
| 3 I2               |               | permanent/full time         | programmer/technician        |                | 150                                   | 325                   | 17.9                            | 48 750                 | 3.01%                                             |
| 3 I2               |               | permanent/full time         | analyst                      |                | 250                                   | 200                   | 11.0                            | 50 000                 | 3.09%                                             |
| 3 I2               |               | individual service contract | consultant                   |                | 225                                   | 200                   | 11.0                            | 45 000                 | 2.78%                                             |

## FORM F1

Proposal acronym: OPERA

## Direct Personnel costs

| Beneficiary number | Action number | Type of contract            | Category/Role in the project | Calculation => | A                                     | B                     | C = B/Productive days per month | A X B                  | % of total direct personnel costs for the project |
|--------------------|---------------|-----------------------------|------------------------------|----------------|---------------------------------------|-----------------------|---------------------------------|------------------------|---------------------------------------------------|
|                    |               |                             |                              |                | Daily rate (rounded to the nearest €) | Number of person-days | Number of person-months         | Direct personnel costs |                                                   |
| 3I2                |               | individual service contract | senior consultant            |                | 450                                   | 55                    | 3.0                             | 24 750                 | 1.53%                                             |
| 3I3                |               | permanent/full time         | programmer/technician        |                | 150                                   | 125                   | 6.9                             | 18 750                 | 1.16%                                             |
| 3I3                |               | permanent/full time         | analyst                      |                | 250                                   | 75                    | 4.1                             | 18 750                 | 1.16%                                             |
| 3I3                |               | individual service contract | consultant                   |                | 225                                   |                       | 0.0                             | 0                      | 0.00%                                             |
| 3I3                |               | individual service contract | senior consultant            |                | 450                                   | 20                    | 1.1                             | 9 000                  | 0.56%                                             |
| 3I4                |               | permanent/full time         | programmer/technician        |                | 150                                   | 125                   | 6.9                             | 18 750                 | 1.16%                                             |
| 3I4                |               | permanent/full time         | analyst                      |                | 250                                   | 75                    | 4.1                             | 18 750                 | 1.16%                                             |
| 3I4                |               | individual service contract | consultant                   |                | 225                                   |                       | 0.0                             | 0                      | 0.00%                                             |
| 3I4                |               | individual service contract | senior consultant            |                | 450                                   | 20                    | 1.1                             | 9 000                  | 0.56%                                             |
| 3C1                |               | permanent/full time         | programmer/technician        |                | 150                                   | 125                   | 6.9                             | 18 750                 | 1.16%                                             |
| 3C1                |               | permanent/full time         | analyst                      |                | 250                                   | 100                   | 5.5                             | 25 000                 | 1.54%                                             |
| 3C1                |               | individual service contract | consultant                   |                | 225                                   | 50                    | 2.8                             | 11 250                 | 0.69%                                             |
| 3C1                |               | individual service contract | senior consultant            |                | 450                                   | 20                    | 1.1                             | 9 000                  | 0.56%                                             |
| 3M1                |               | permanent/full time         | programmer/technician        |                | 150                                   |                       | 0.0                             | 0                      | 0.00%                                             |
| 3M1                |               | permanent/full time         | analyst                      |                | 250                                   | 55                    | 3.0                             | 13 750                 | 0.85%                                             |
| 3M1                |               | individual service contract | consultant                   |                | 225                                   |                       | 0.0                             | 0                      | 0.00%                                             |
| 3M1                |               | individual service contract | senior consultant            |                | 450                                   | 20                    | 1.1                             | 9 000                  | 0.56%                                             |
| 4I4                |               | permanent/full time         | scientific researcher        |                | 263                                   | 296                   | 16.0                            | 77 848                 | 4.81%                                             |
| 4P3                |               | permanent/full time         | scientific researcher        |                | 263                                   | 9.25                  | 0.5                             | 2 433                  | 0.15%                                             |
| 4C1                |               | permanent/full time         | scientific researcher        |                | 263                                   | 27.75                 | 1.5                             | 7 298                  | 0.45%                                             |

## FORM F1

Proposal acronym: OPERA

## Direct Personnel costs

| Beneficiary number | Action number | Type of contract    | Category/Role in the project | Calculation => | A      | B           | C = B/Productive days per month | A X B     | % of total direct personnel costs for the project |
|--------------------|---------------|---------------------|------------------------------|----------------|--------|-------------|---------------------------------|-----------|---------------------------------------------------|
|                    | 4 M1          | permanent/full time | scientific researcher        |                | 465    | 74          | 4.0                             | 34 410    | 2.12%                                             |
|                    | 4 P3          | permanent/full time | scientific researcher        |                | 465    | 9.25        | 0.5                             | 4 301     | 0.27%                                             |
|                    | 4 C1          | permanent/full time | scientific researcher        |                | 465    | 16.65       | 0.9                             | 7 742     | 0.48%                                             |
|                    | 4 I4          | permanent/full time | scientific researcher        |                | 376    | 38.85       | 2.1                             | 14 608    | 0.90%                                             |
|                    | 4 P3          | permanent/full time | scientific researcher        |                | 376    | 9.25        | 0.5                             | 3 478     | 0.21%                                             |
|                    | 4 C1          | permanent/full time | scientific researcher        |                | 376    | 18.5        | 1.0                             | 6 956     | 0.43%                                             |
|                    | 4 I4          | temporary/full time | Ingenior                     |                | 216    | 379.25      | 20.5                            | 81 918    | 5.06%                                             |
|                    | 4 C1          | temporary/full time | Ingenior                     |                | 216    | 27.75       | 1.5                             | 5 994     | 0.37%                                             |
|                    | 4 P3          | temporary/full time | Ingenior                     |                | 216    | 37          | 2.0                             | 7 992     | 0.49%                                             |
|                    | 4 I4          | permanent/full time | Ingenior                     |                | 367    | 66.6        | 3.6                             | 24 442    | 1.51%                                             |
|                    |               |                     |                              |                |        |             | 0.0                             | 0         | 0.00%                                             |
|                    |               |                     |                              |                |        |             | 0.0                             | 0         | 0.00%                                             |
|                    |               |                     |                              | TOTAL =>       | 6692.1 | 369.1385726 |                                 | 1 619 414 | 100%                                              |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## FORM F2

Proposal acronym: OPERA

## Travel and subsistence costs

| Calculation =>     |               |                                    |                       |                                                                                      | A            | B                 | A + B                              |                                         |
|--------------------|---------------|------------------------------------|-----------------------|--------------------------------------------------------------------------------------|--------------|-------------------|------------------------------------|-----------------------------------------|
| Beneficiary number | Action number | Destination (From / To)            | Outside EU (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 1                  | C1            | BOLOGNA-STRASBOURG                 | NO                    | final conference 4personsx3days                                                      | 2 800        | 2 000             | 4 800                              | 6.57%                                   |
| 1                  | C1            | BOLOGNA-ISPRA                      | NO                    | scientific conference 4personsx2days                                                 | 400          | 600               | 1 000                              | 1.37%                                   |
| 1                  | P2            | BOLOGNA-PARMA                      | NO                    | 9 meetings for new RIAT implementation                                               | 720          | 720               | 1 440                              | 1.97%                                   |
| 1                  | I3            | BOLOGNA-PARMA                      | NO                    | 9 meetings for new RIAT implementation                                               | 720          | 720               | 1 440                              | 1.97%                                   |
| 1                  | I3            | BOLOGNA-STRASBOURG                 | NO                    | 1 interim meeting for new RIAT implementation                                        | 2 800        | 1 840             | 4 640                              | 6.35%                                   |
| 1                  | M1            | BOLOGNA-BRUXELLES                  | NO                    | 2 meeting 2personsX3days                                                             | 2 800        | 2 000             | 4 800                              | 6.57%                                   |
| 1                  | M1            | BOLOGNA-MILANO                     | NO                    | 6 Plenary meetings 3 persons (1 day)                                                 | 1 200        | 750               | 1 950                              | 2.67%                                   |
| 2                  | P1            | Brescia (I) - Strasbourg (FR)      | NO                    | technical meeting 1 person (3 days)                                                  | 500          | 900               | 1 400                              | 1.92%                                   |
| 2                  | P1            | Brescia (IT) - Bologna (IT)        | NO                    | technical meeting 2 persons (1day)                                                   | 150          | 60                | 210                                | 0.29%                                   |
| 2                  | P2            | Brescia (IT) - Bologna (IT)        | NO                    | 2 technical meetings: 1 person (1 day)                                               | 150          | 60                | 210                                | 0.29%                                   |
| 2                  | P3            | Brescia (I) - Strasbourg (FR)      | NO                    | technical meeting 1 person (3 days)                                                  | 500          | 900               | 1 400                              | 1.92%                                   |
| 2                  | I1            | Brescia (IT) - Bologna (IT)        | NO                    | 3 technical meetings: 2 persons (1 day)                                              | 450          | 180               | 630                                | 0.86%                                   |
| 2                  | I1            | Brescia (I) - Strasbourg (FR)      | NO                    | 1 technical meeting: 1 person (3 days)                                               | 500          | 900               | 1 400                              | 1.92%                                   |
| 2                  | I2            | Brescia (IT) - Milan (IT)          | NO                    | 3 technical meetings: 1 person (1 day)                                               | 150          | 90                | 240                                | 0.33%                                   |
| 2                  | I3            | Brescia (IT) - Bologna (IT)        | NO                    | 3 technical meetings: 2 persons (1 day)                                              | 450          | 180               | 630                                | 0.86%                                   |
| 2                  | I4            | Brescia (I) - Strasbourg (FR)      | NO                    | 2 technical meetings: 2 persons (3 days each)                                        | 2 000        | 3 600             | 5 600                              | 7.66%                                   |
| 2                  | C1            | Brescia (I) - Strasbourg (FR)      | NO                    | final conference: 3 persons (3 days each)                                            | 1 500        | 2 700             | 4 200                              | 5.75%                                   |
| 2                  | C1            | Brescia (IT) - Bologna (IT)        | NO                    | intermediate conference: 2 persons (2 days)                                          | 150          | 640               | 790                                | 1.08%                                   |
| 2                  | C1            | Brescia (IT) - Ispra (IT)          | NO                    | scientific conference: 2 persons (2 days each)                                       | 140          | 640               | 780                                | 1.07%                                   |
| 2                  | M1            | Brescia (IT) - Milan (IT)          | NO                    | 6 Plenary meetings 3 persons (1 day)                                                 | 900          | 540               | 1 440                              | 1.97%                                   |
| 2                  | M1            | Brescia (I) - Bruxelles (BE)       | NO                    | KO meeting: 1 person (3 days)                                                        | 500          | 900               | 1 400                              | 1.92%                                   |
| 3                  | P1            | MILAN-ISPRA                        | NO                    | 1 meeting on new RIAT requirements                                                   | 50           | 100               | 150                                | 0.21%                                   |
| 3                  | P1            | MILAN-BOLOGNA                      | NO                    | 1 meeting on new RIAT requirements                                                   | 150          | 100               | 250                                | 0.34%                                   |
| 3                  | I1            | MILAN-BRESCIA                      | NO                    | 9 meetings for new RIAT implementation                                               | 540          | 900               | 1 440                              | 1.97%                                   |
| 3                  | I2            | MILAN-STRASBOURG                   | NO                    | 1 meeting for new RIAT implementation 2                                              | 1 400        | 1 000             | 2 400                              | 3.28%                                   |
| 3                  | I2            | MILAN-BOLOGNA                      | NO                    | 1 meeting for new RIAT implementation                                                | 150          | 100               | 250                                | 0.34%                                   |
| 3                  | I2            | MILAN-ISPRA                        | NO                    | 1 meeting for new RIAT implementation                                                | 50           | 100               | 150                                | 0.21%                                   |
| 3                  | I4            | MILAN-STRASBOURG                   | NO                    | 2 meetings for new RIAT implementation 2                                             | 2 800        | 2 000             | 4 800                              | 6.57%                                   |
| 3                  | I3            | MILAN-BOLOGNA                      | NO                    | 2 meetings for new RIAT implementation                                               | 300          | 200               | 500                                | 0.68%                                   |
| 3                  | C1            | MILAN-STRASBOURG                   | NO                    | final conference 2personsx3days                                                      | 1 400        | 920               | 2 320                              | 3.17%                                   |
| 3                  | C1            | MILAN-BOLOGNA                      | NO                    | intermediate conference 2personsx2days                                               | 150          | 600               | 750                                | 1.00%                                   |
| 3                  | C1            | MILAN-ISPRA                        | NO                    | scientific conference 2personsx2days                                                 | 50           | 600               | 650                                | 0.89%                                   |
| 4                  | P1            | STRASBOURG-BOLOGNA                 | NO                    | 1 meeting on new RIAT requirements                                                   | 500          | 440               | 940                                | 1.29%                                   |
| 4                  | I1            | STRASBOURG-BRESCIA                 | NO                    | 1 meeting for new RIAT implementation                                                | 500          | 440               | 940                                | 1.29%                                   |
| 4                  | I2            | STRASBOURG-MILAN                   | NO                    | 1 meeting for new RIAT implementation                                                | 500          | 440               | 940                                | 1.29%                                   |
| 4                  | C1            | STRASBOURG-BOLOGNA                 | NO                    | intermediate conference 2personsx2days                                               | 1 000        | 880               | 1 880                              | 2.57%                                   |
| 4                  | C1            | STRASBOURG-ISPRA                   | NO                    | scientific conference 2personsx2days                                                 | 1 000        | 880               | 1 880                              | 2.57%                                   |
| 4                  | M1            | STRASBOURG-MILAN                   | NO                    | 6 Plenary meetings 1personx2 days                                                    | 3 000        | 2 640             | 5 640                              | 7.72%                                   |
| 2                  | I1            | 2 scientific conferences in Europe | NO                    | 2 persons for two scientific conferences (4 days)                                    | 2 000        | 4 800             | 6 800                              | 9.30%                                   |
| TOTAL =>           |               |                                    |                       |                                                                                      | 35 020       | 38 060            | 73 080                             | 100%                                    |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## External assistance costs

| Beneficiary number | Action number | Procedure                                                    | Description                                                     | Costs (€) | % of total external assistance costs |
|--------------------|---------------|--------------------------------------------------------------|-----------------------------------------------------------------|-----------|--------------------------------------|
| 1                  | P2            | Rules in force for public bodies (Restricted call procedure) | External support for data collection                            | 48 000    | 11.46%                               |
| 1                  | I3            | Rules in force for public bodies (Restricted call procedure) | External support for RIAT+ tools implementation                 | 48 000    | 11.46%                               |
| 1                  | I3            | Rules in force for public bodies (Restricted call procedure) | External support for NINFA-E tools implementation               | 48 000    | 11.46%                               |
| 1                  | M1            | Rules in force for public bodies (Direct treaty)             | Technical/scientific publication in a EU multilingual format    | 15 000    | 3.58%                                |
| 1                  | M1            | Rules in force for public bodies (Direct treaty)             | Auditor                                                         | 5 000     | 1.19%                                |
| 1                  | M1            | Rules in force for public bodies (Direct treaty)             | 2 public conferences organization (Ispra and Bologna)           | 20 000    | 4.77%                                |
| 1                  | I3            | Rules in force for public bodies (Direct treaty)             | Internal workshops and courses Emilia-Romagna organization      | 10 000    | 2.39%                                |
| 2                  | P1            | Rules in force for public bodies                             | Consultancy on review of European and national integrated       | 25 000    | 5.97%                                |
| 2                  | I1            | Rules in force for public bodies                             | Consultancy on dose-response functions to assess external costs | 15 000    | 3.58%                                |
| 2                  | I3            | Rules in force for public bodies                             | Consultancy external costs assessment: Emilia Romagna (IT)      | 15 000    | 3.58%                                |
| 2                  | I4            | Rules in force for public bodies                             | Consultancy external costs assessment: Alsace (FR) application  | 15 000    | 3.58%                                |
| 3                  | C1            | Direct treaty                                                | Graphical support (logo, website, panel, brochure, Layman's     | 15 000    | 3.58%                                |
| 3                  | I2            | Direct treaty                                                | GIS procedure expert                                            | 40 000    | 9.55%                                |
| 4                  | P3            | Public tender                                                | Follow post-doc work, collect data for Alsace.                  | 50 000    | 11.93%                               |
| 4                  | C1            | Public tender                                                | Organisation of final conference                                | 10 000    | 2.39%                                |
| 4                  | I4            | Public tender                                                | Modeling simulations and assessment                             | 30 000    | 7.16%                                |
| 4                  | I3            | Public tender                                                | Internal workshops and courses Alsace organization              | 10 000    | 2.39%                                |
| TOTAL =>           |               |                                                              |                                                                 | 419 000   | 100%                                 |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## FORM F4 a

Proposal acronym: OPERA

**Durable goods: Infrastructure costs**

| Beneficiary number | Action number | Procedure | Description | Actual cost | Depreciation (eligible cost) | % of total infrastructure costs |
|--------------------|---------------|-----------|-------------|-------------|------------------------------|---------------------------------|
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
|                    |               |           |             |             |                              | #DIV/0!                         |
| TOTAL =>           |               |           |             | 0           | 0                            | #DIV/0!                         |

Please refer to Articles 25.6 to 25.9 of the Common Provisions to see if the infrastructure in question is subject to depreciation and what depreciation rates should be applied

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## Durable goods: Equipment costs

| Beneficiary number | Action number | Procedure | Description                                            | Actual cost | Depreciation<br>(eligible cost) | % of total<br>Equipment costs |
|--------------------|---------------|-----------|--------------------------------------------------------|-------------|---------------------------------|-------------------------------|
| 3 I2               | Direct treaty |           | 5 laptops with Office licence                          | 11 000      | 5 500                           | 35.60%                        |
| 3 I2               | Direct treaty |           | 2 Fortran licences                                     | 1 100       | 550                             | 3.56%                         |
| 3 I2               | Direct treaty |           | 3 Java develop licences and 3 graphical tools licences | 1 395       | 698                             | 4.52%                         |
| 4 I4               | Public tender |           | 3 Pcs Work stations 2 proc quad core                   | 7 500       | 3 750                           | 24.28%                        |
| 4 I4               | Public tender |           | 2 laptops with office licence                          | 4 400       | 2 200                           | 14.24%                        |
| 4 I4               | Public tender |           | PC server 8 proc quad core with 3To space disk         | 5 500       | 2 750                           | 17.80%                        |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           |                                                        |             |                                 | 0.00%                         |
|                    |               |           | TOTAL =>                                               | 30 895      | 15 448                          | 100%                          |

Please refer to articles 100 and 101 of the Common Provisions to see if the equipment in question is subject to depreciation and what depreciation rates should be applied

**Please refer to the relevant instructions given in the explanatory notes for filling in these forms**

## FORM F4 c

Proposal acronym: OPERA

## Durable goods: Prototype costs

| Beneficiary number   | Action number | Procedure | Description | Actual Cost | % of total prototype costs |
|----------------------|---------------|-----------|-------------|-------------|----------------------------|
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
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|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
|                      |               |           |             |             | #DIV/0!                    |
| TOTAL (sum above) => |               |           |             | 0           | #DIV/0!                    |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## Consumables

[illegible]

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

FORM F7

## Other costs

| Beneficiary number | Action number | Procedure | Description                | Costs | % of total |
|--------------------|---------------|-----------|----------------------------|-------|------------|
| 211                |               |           | Scientific conference fees | 1 200 | 100.00%    |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
|                    |               |           |                            |       | 0.00%      |
| TOTAL =>           |               |           |                            | 1 200 | 100%       |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms



# **COMMON PROVISIONS**

## **2009**

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## **COMMON PROVISIONS**

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### **PART I - Legal and Administrative Provisions**

#### **Article 1 - References**

All LIFE+ projects shall be carried out in accordance with, in order of precedence:

- Regulation (EC) No 614/2007 of the European Parliament and of the Council of 23 May 2007 (LIFE+)<sup>1</sup>,
- The special provisions of the grant agreement sent for signature to the coordinating beneficiary,
- These common provisions included in the grant agreement,
- The project proposal (hereinafter referred to as "the project") identified in the grant agreement (Annex I),

which form an integral part of the grant agreement.

#### **Article 2 - Responsible Commission service and correspondence**

- 2.1 For the purposes of implementation of the provisions set out below, the Commission shall be represented by the Directorate-General for the Environment in the person of its authorising officer or authorising officer by sub-delegation.
- 2.2 All correspondence must bear the identification number and project title and must be sent to the following address:

LIFE + projects on Nature & Biodiversity, LIFE + project on Information and Communication dealing with Nature and Biodiversity issues:

**European Commission  
Directorate-General Environment  
Unit ENV.E.3 - BU-9 2/58  
B - 1049 Brussels**

LIFE + projects on Environment Policy and Governance, LIFE + project on Information and Communication not dealing with Nature and Biodiversity issues:

**European Commission  
Directorate-General Environment  
Unit ENV.E.4 - BU-9 2/1  
B - 1049 Brussels**

A copy of all correspondence must be sent to the external monitoring team designated by the Commission.

Mail shall be considered to have been received by the Commission on the date on which it is formally registered by the responsible Commission unit referred above.

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<sup>1</sup> OJ L 149, 9.6.2007, p. 1.

### **Article 3 - Participants**

LIFE+ projects may involve four types of "participants", depending on their roles and obligations:

- coordinating beneficiary,
- associated beneficiary(ies),
- co-financier(s),
- subcontractor(s).

### **Article 4 - Role and obligations of the coordinating beneficiary**

- 4.1 By "coordinating beneficiary" is meant the person or entity which is solely legally and financially responsible to the Commission for the full implementation of the project measures in order to achieve the project objectives and for the dissemination of the project results.
- 4.2 The coordinating beneficiary, through the mandate annexed to the grant agreement, is granted power of attorney by the associated beneficiaries, to act in their name and for their account in signing the grant agreement and its possible subsequent amendments with the Commission.
- 4.3 The coordinating beneficiary accepts all the provisions of the agreement with the Commission.
- 4.4 By virtue of the mandate signed, the coordinating beneficiary alone is entitled to receive funds from the Commission and distribute the amounts corresponding to the associated beneficiaries' participation in the project and as specified in the agreements established between the associated beneficiaries as stipulated in Article 4.8.
- 4.5 Whenever an associated beneficiary/co-financier reduces its financial contribution, it shall be incumbent upon the coordinating beneficiary, in agreement with its associated beneficiaries, to find the necessary resources to ensure correct implementation of the project. In no case shall the Commission increase its contribution or the rate of co-financing.
- 4.6 Notwithstanding the provisions in Article 24, the coordinating beneficiary shall contribute financially to the project.
- 4.7 The coordinating beneficiary shall be the single point of contact for the Commission and shall be the only participant to report directly to the Commission on the technical and financial progress of the project. The coordinating beneficiary shall therefore provide to the Commission all the necessary reports, in accordance with Article 12.
- 4.8 The coordinating beneficiary shall conclude with all associated beneficiaries agreements describing their technical and financial participation in the project. Such agreements shall be fully compatible with the grant agreement signed with the Commission, shall make a precise reference to the present common provisions and shall have, as a minimum, the contents described in the Guidelines issued by the Commission. They shall be signed by the coordinating beneficiary and the associated beneficiaries and notified to the Commission within nine months from the starting date of the project. The provisions of the grant agreement, including the mandate (Articles 5.2 and 5.3), shall take precedence over any other

agreement between the associated beneficiary and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

#### **Article 5 - Role and obligations of associated beneficiaries**

- 5.1 The associated beneficiaries are exclusively the organisations identified as such in the project and committed to the project implementation through relevant forms. The associated beneficiary shall sign the agreement foreseen in Article 4.8 and be directly involved in the technical implementation of one or more tasks of the project.
- 5.2 The associated beneficiary, through the mandate annexed to the grant agreement, grants power of attorney to the coordinating beneficiary, to act in his name and for his account in signing the grant agreement and its possible subsequent amendments with the Commission. Accordingly, the associated beneficiary mandates the coordinating beneficiary to take full legal responsibility for the implementation of the agreement.
- 5.3 The associated beneficiary accepts all the provisions of the agreement with the Commission, in particular all provisions affecting the associated beneficiary and the coordinating beneficiary. In particular, he acknowledges that, by virtue of the mandate signed, the coordinating beneficiary alone is entitled to receive funds from the Commission and distribute the amounts corresponding to the associated beneficiary's participation in the action.
- 5.4 The associated beneficiary shall do everything in his power to help the coordinating beneficiary fulfil the coordinating beneficiary's obligations under the grant agreement. In particular, the associated beneficiary hereby shall provide to the co-ordinating beneficiary whatever documents or information (technical and financial) may be required, as soon as possible after receiving the request from the coordinating beneficiary.
- 5.5 Each associated beneficiary must contribute financially to the project and shall benefit from the financial contribution from the Commission in the conditions stipulated in the agreement foreseen in Article 4.8.
- 5.6 The associated beneficiaries shall not report directly to the Commission on the technical and financial progress unless explicitly requested to do so by the Commission.

#### **Article 6 - Common obligations for both the coordinating beneficiary and the associated beneficiaries**

- 6.1 The coordinating beneficiary and the associated beneficiaries shall maintain up-to-date books of account, in accordance with the normal accounting conventions imposed on them by law and existing regulations. For the sake of traceability of expenditure and income, an analytical accounting system (cost centre accounting) shall be put in place. The coordinating beneficiary and the associated beneficiaries shall retain, throughout the project and for at least five years after the final payment, all appropriate supporting documentation for all expenditure, income and revenue for the project as reported to the Commission, such as tender documents, invoices, purchase orders, proof of payments, salary slips, time sheets and any other documents used for the calculation and presentation of costs. This documentation shall be clear, precise and effective and shall be submitted to the

Commission when requested. The coordinating beneficiary shall retain copies of all supporting documents of all the associated beneficiaries.

- 6.2 The coordinating beneficiary and the associated beneficiaries shall ensure that all invoices include a clear reference to the project, linking them to the analytical accounting system.
- 6.3 The coordinating beneficiary and the associated beneficiaries shall ensure that the Community support is publicised, as detailed in Article 13.
- 6.4 The coordinating beneficiary and the associated beneficiaries shall share freely the know-how necessary for implementation of the project.
- 6.5 The coordinating beneficiary shall not act, in the context of the project, as sub-contractor or supplier to the associated beneficiaries. The associated beneficiaries shall not act, in the context of the project, as sub-contractor or supplier to the coordinating beneficiary or other associated beneficiaries.

#### **Article 7 - Project co-financiers**

- 7.1 Co-financiers shall only contribute financially to the project, shall not be directly involved in the technical implementation of the project and shall not benefit from the Community funding.
- 7.2 The coordinating beneficiary and/or its associated beneficiaries shall conclude with co-financiers any agreements necessary to ensure co-funding, provided these do not infringe the obligations of the coordinating beneficiary and/or associated beneficiaries, as stated in the grant agreement.

#### **Article 8 - Subcontractors**

- 8.1 For specific tasks of a fixed duration, a project may also include subcontractors, who shall not be considered as associated beneficiaries.
- 8.2 Subcontractors shall provide external services to the coordinating beneficiary and/or associated beneficiaries, who shall pay the full price corresponding to the service provided.
- 8.3 Subcontractors shall make no financial investment in the project and, therefore, shall not benefit from any intellectual property rights arising from the project.
- 8.4 Any public coordinating beneficiary/associated beneficiary must award subcontracts in accordance with the applicable rules on public tendering, in conformity with Community Directives on public tendering procedures.

For contracts exceeding € 125 000, any private coordinating beneficiary / associated beneficiary shall invite competitive tenders from potential subcontractors and award the contract to the bid offering best value for money; in doing so it shall observe the principles of transparency and equal treatment of potential subcontractors and shall take care to avoid any conflict of interest.

The rules on tendering referred to in the previous two paragraphs shall also apply in case of purchase of durable goods.

- 8.5 All invoices issued by subcontractors shall bear a clear reference to the LIFE+ project (i.e. number and title or short title) and to the order/subcontract issued by the coordinating beneficiary/associated beneficiary. All invoices shall also be sufficiently detailed as to allow identification of single items covered by the service delivered (i.e. clear description and cost of each item).

## **Article 9 - Role of external monitoring teams**

- 9.1 To follow up the project, the Commission shall be supported by external monitoring teams. The monitoring teams shall assist by following and assessing the project's progress and its coherence with the incurred costs. They shall act strictly as an advisory body to the Commission. The monitoring teams shall be independent from the projects. The monitoring teams shall verify the project's implementation and provide assessments of the reports submitted to the Commission.
- 9.2 Monitoring teams shall not be authorised to take any decision on behalf of the Commission. A recommendation or a statement provided by the monitoring teams to the coordinating beneficiary or to the associated beneficiaries cannot be interpreted as representing a position of the Commission.
- 9.3 The external monitoring teams shall act under the same confidentiality rules as those established between the participants in the project and the Commission (as stipulated in Article 20).

## **Article 10 - Civil liability**

- 10.1 The Commission may not, under any circumstances or for any reason whatsoever, be held liable in the event of claims deriving from the grant agreement concerning any damage or injury while the project is being carried out. No claim for compensation or repayment accompanying such a complaint shall be accepted by the Commission.
- 10.2 The coordinating beneficiary shall exonerate the Commission from any liability connected to the relationship with their associated beneficiaries or to the agreements signed in this context.
- 10.3 The coordinating beneficiary and associated beneficiaries shall assume sole liability towards third parties, including for damage of any kind sustained by them while the project is being carried out.

## **Article 11 - Conflict of interest**

- 11.1 The coordinating beneficiary and all associated beneficiaries undertake to take all the necessary measures to prevent any risk of conflicts of interest which could affect the impartial and objective performance of the grant agreement. Such conflicts of interest could arise in particular as a result of economic interest, political or national affinity, family or emotional reasons, or any other shared interest.
- 11.2 Any situation constituting or likely to lead to a conflict of interest during the performance of the grant agreement must be brought to the attention of the Commission, in writing, without delay. The coordinating beneficiary and all associated beneficiaries shall, without delay, take whatever steps are necessary to rectify this situation. The Commission reserves the right to check that the measures taken are appropriate and may itself take further action if this is deemed necessary.

## Article 12 - Technical activity reports

12.1 The coordinating beneficiary must regularly inform the Commission on the progress and on the achievements of the LIFE+ project through the submission of the following reports:

- One inception report, to be delivered within nine months of the project start;
- One final report, to be delivered within three months of the project end;
- For projects with a duration exceeding 24 months and a Community contribution of more than € 300 000, one mid-term report, to be delivered, together with the request for mid-term pre-financing, after the threshold defined in Article 28.3 has been reached;
- Any progress reports needed to ensure that the delay between consecutive reports does not exceed 18 months.

Exceptionally, if the threshold defined in Article 28.3 is reached within the first nine months of the project duration, the inception report and the mid-term report might be merged into one.

Information concerning the technical and/or financial management of the project can be requested by the Commission at any time.

12.2 The form and contents of the reports shall be in accordance with the Guidelines issued by the Commission.

All reports shall contain the necessary information for the Commission to evaluate the state of implementation of the project, the respect of the work plan, the financial situation of the project and whether the project's objectives have been achieved or are still achievable. Inception, mid-term and final reports shall also contain the information described in the relevant Articles, 12.5 to 12.7.

12.3 All reports, in both paper and electronic versions, shall be simultaneously forwarded to the Commission and to the external monitoring team designated by the Commission, both of them receiving one complete copy of the technical reports, including annexes, and one copy of the statement of expenditure and income.

12.4 The coordinating beneficiary shall submit a copy of the final report to the Member State authorities. These latter also have the right to ask for a copy of the mid-term report.

12.5 Inception report

In addition to the information required in Article 12.2, the inception report shall contain an assessment as to whether the project objectives and work plan are still valid. On the basis of the inception report submitted by the coordinating beneficiary, and if the project's objectives are not achievable or the work plan is not feasible, the Commission may launch an early termination procedure, in accordance with Article 19.

12.6 Mid-term report

In addition to the information required in Article 12.2, the mid-term report shall contain a statement of expenditure and income and sufficient information to allow for a preliminary assessment of the eligibility of costs incurred so far.

#### 12.7 Final report

In addition to the information required in Article 12.2, the final report shall contain a statement of expenditure and income and all the information necessary for the Commission to evaluate the eligibility of costs incurred and the sustainability in the future of the project results.

#### **Article 13 - Communication actions, publicity for Community support and audio-visual products**

- 13.1 The coordinating beneficiary and associated beneficiaries shall publicise the project and its results, always mentioning the Community support received. Details of this activity shall be given in each activity report.
- 13.2 The coordinating beneficiary and associated beneficiaries shall acknowledge the support given by the Community in all documents and media produced in the framework of the project, using the LIFE logo provided by the Commission. For audio-visual material, the credits at the beginning and/or at the end shall include an explicit and readable mention of the LIFE support (e.g. "With the contribution of the LIFE financial instrument of the European Community").
- 13.3 The LIFE logo may not be referred to as a certified quality label or eco-label. Its use shall be restricted to dissemination activities.
- 13.4 The coordinating beneficiary shall create a project website or use an existing website for the dissemination of project activities, progress and results. The web address where the main results of the project are available to the public shall be indicated in the reports. This website shall be online at the latest six months after the start of the project, shall be regularly updated and shall be kept for at least five years after the end of the project.
- 13.5 The coordinating beneficiary and associated beneficiaries shall erect and maintain notice boards describing the project at the locations where it is implemented, at strategic places accessible and visible to the public. The LIFE logo shall appear on them at all times.
- 13.6 For LIFE+ Nature projects, the obligations in Article 13.2 and in Article 13.5 also apply for the Natura 2000 logo. The project's importance in terms of establishing the Natura 2000 network must be described in the notice boards.
- 13.7 A summary of the project, including name and contact information of the coordinating beneficiary, will be placed on the LIFE website and made available to the general public.
- 13.8 All durable goods acquired in the framework of the project shall bear the LIFE logo unless otherwise specified by the Commission.
- 13.9 Notwithstanding the provisions of Article 20, the Commission shall be authorised to publish, in whatever form and in whatever medium, including the Internet, all the information related to the project or produced by the project that it considers relevant. The coordinating beneficiary and all associated beneficiaries shall grant the Commission the non-exclusive right to reproduce, to dub if necessary, to distribute or to use any audio-visual document produced by the project, completely or partly, without time limit, for non-commercial purposes, including during public events. Nevertheless, the Commission shall not be considered as "co-producer". The Commission reserves the right to use the photographs submitted in the various reports referred to in Article 12 to illustrate any

information material it produces. It undertakes to credit these by indicating the project reference number.

#### **Article 14 - Spatial data**

Electronic tools, which include spatial data and are produced in the frame of a LIFE+ project, shall comply with the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)<sup>2</sup>.

#### **Article 15 - Amendment to the agreement**

- 15.1 The coordinating beneficiary shall inform the Commission, in the technical reports or by letter, of any changes to the project as detailed in the grant agreement. Changes that would fundamentally alter the overall objectives of the project, that would call into question the grant award decision or that would be contrary to the equal treatment of applicants will not be accepted.
- 15.2 When the changes are substantial, written additional agreement by the Commission must be issued. Substantial changes are:
- Significant changes to the nature or content of actions and/or deliverables;
  - Changes of the legal status of the coordinating beneficiary or of an associated beneficiary;
  - Changes to the project partnership structure;
  - Changes to the duration of the project;
  - Changes to the provisional project budget, increasing by more than 10 % and € 30 000 the costs foreseen in one or more categories of expenditure. These thresholds shall apply to each of the three subcategories of durable goods. They shall not apply to the category of "overheads", for which the limit stipulated in Article 25.13 may not be exceeded.
- 15.3 In the cases foreseen in Article 15.2 the coordinating beneficiary shall submit a formal request for changes, in accordance with the Guidelines issued by the Commission. When a request for changes includes modifications of the project partnership and/or of the budget made available by an associated beneficiary or a co-financier, the associated beneficiary / co-financier involved shall also sign the modification request. The Commission reserves the right to accept or to refuse the request and may decide not to take into consideration any request received later than three months before the end of the project.

#### **Article 16 - Delayed performance**

- 16.1 The starting date of a project is the date indicated in the special provisions of the grant agreement, irrespective of the dates of signature of the grant agreement or of the payment of the first pre-financing.
- 16.2 The coordinating beneficiary shall inform the Commission, without delay and with full details, of any event that is liable to obstruct or delay the performance of the project. The parties concerned shall agree on the measures to be taken.

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<sup>2</sup> OJ L 108, 25.4.2007, p. 1.

- 16.3 The Commission reserves the right to terminate the grant agreement or cancel the grant, where a significant delay would occur, that would lead to a reduction in the value of the results.

#### **Article 17 - Postponement of the end date**

- 17.1 A postponement of the end date of a project may be granted only in unforeseeable, exceptional circumstances, which make the implementation of one of more project actions impossible for a certain period of time.
- 17.2 A request for postponement of the end date of a project must be submitted in accordance with the Guidelines issued by the Commission and include sufficient information for the Commission to assess the justification for the delays and the feasibility of a revised work plan. The Commission reserves the right to accept or to refuse the request and may decide not to take into consideration any request received later than three months before the end of the project.

#### **Article 18 - Reduction in performances and technical failures**

The Commission reserves the right to reduce as appropriate the Community co-financing if substantial quantitative or qualitative reductions occur in the implementation of project actions.

#### **Article 19 - Termination of the project**

- 19.1 The Commission may terminate the grant agreement, without any indemnity on its part:
- should the coordinating beneficiary, for no valid technical or economic reason, fail to fulfil a substantial obligation incumbent on him under the terms of the grant agreement;
  - in the event of *force majeure* or if the action has been suspended as a result of exceptional circumstances;
  - if it becomes clear that the project will not achieve its objectives; or
  - if the coordinating beneficiary is responsible for substantial irregularities in the management of a project.
- 19.2 For the purpose of the termination of a project, the Commission shall apply a standard procedure or an urgent procedure.
- 19.3 Standard procedure
- The Commission will send a first registered letter in which it indicates that the termination procedure has been initiated, explains the reasons for this, enjoins the coordinating beneficiary to comply with the obligations set by the grant agreement and invites him to reply within thirty days of receipt of this first letter.
  - After evaluation of any comments submitted by the coordinating beneficiary, the Commission will either annul or suspend the termination procedure, or send a second registered letter in which it will notify the coordinating beneficiary that the project is terminated and set the new end date of the project.

If the Commission does not receive a reply to its first letter within thirty days from the date of its receipt the project is considered to have ended on that deadline.

In all cases where the procedure ends in termination of the project, a final report is due within three months of the new end date of the project.

#### 19.4 Urgent procedure

The Commission may terminate the grant agreement, with immediate effect, without notice and without paying compensation of any kind if:

- The coordinating beneficiary is declared bankrupt, is wound up or is the object of similar proceedings;
- The coordinating beneficiary deliberately made false or incomplete statements to obtain the Community financial contribution provided for in the agreement;
- The coordinating beneficiary has, intentionally or by negligence, committed a substantial irregularity in performing the agreement, which causes or might cause a loss to the Community budget;
- The coordinating beneficiary commits fraud, corruption or any other illegal activity, to the detriment of the Communities' financial interests; or
- The coordinating beneficiary is found guilty of an offence involving his professional conduct by a judgement having the force of *res judicata* or is guilty of grave professional misconduct proven by any justified means.

In this case, the Commission will notify the coordinating beneficiary through a registered letter that the project is terminated with immediate effect. A final report is due within three months of the new end date of the project.

- 19.5 Termination of the grant agreement for financial irregularities shall be without prejudice to the application of other administrative measures or penalties which may be imposed in accordance with Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities' financial interests<sup>3</sup>.

In the event of termination of the grant agreement, the Commission may demand full or partial repayment of amounts already paid. Only the information available at the end of the procedures described in Articles 19.3 and 19.4 will be considered to determine the amount of eligible expenditure.

- 19.6 The coordinating beneficiary may terminate the project at any time by giving formal written notice, provided valid economic or technical reasons exist. The coordinating beneficiary shall be under an obligation to present a final report, at the latest three months after the above mentioned formal written notice, outlining the status of the implementation of the project and the reasons for termination, together with a final statement of expenditure and income, on the basis of which the Commission will determine the amount of eligible expenditure. If no reasons are given or if the Commission does not accept the reasons, the coordinating beneficiary shall be deemed to have terminated this agreement improperly and the Commission may ask for repayment of amounts already paid.

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<sup>3</sup> OJ L 312, 23.12.1995, p. 1.

## **Article 20 - Confidentiality**

The Commission and the coordinating beneficiary/associated beneficiaries undertake to preserve the confidentiality of any document, information or other material communicated to them in confidence, disclosure of which could harm another party. The parties shall remain bound by this obligation beyond the closing date of the project. The personal data included in the project will be placed on an electronic management tool, which is made available to the European Commission, to other EU institutions and to an external monitoring team, which are bound by a confidentiality agreement. This management tool is used exclusively to manage LIFE projects.

## **Article 21 - Protection of data**

- 21.1 The coordinating beneficiary has the right to access data and information in possession of the Commission which concern its project, and to request possible corrections.
- 21.2 The Commission, the coordinating beneficiary and the associated beneficiaries will respect Regulation (EC) no 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data<sup>4</sup>.
- 21.3 Notwithstanding the provisions of Article 20, the coordinating beneficiary shall be aware of the obligations set by the Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents<sup>5</sup>.

## **Article 22 - Ownership and exploitation of results**

- 22.1 The coordinating beneficiary and/or its associated beneficiaries shall be the owners of documents, possibly patentable or patented inventions and expertise obtained pursuant to the project.
- 22.2 The Commission, with a view to promoting the use of techniques or models favourable to the environment, attaches great importance to the coordinating beneficiary making these documents, patents and know-how available in the Community as soon as they are available, on non-discriminatory and reasonable commercial conditions.
- 22.3 The Commission expects the coordinating beneficiary and/or its associated beneficiaries to comply with Article 22.2 for a period of five years after termination of the project.
- 22.4 Should the coordinating beneficiary, for no legitimate reason, refuse to give access to these products or to grant licences under these conditions, the Commission reserves the right to apply the rules in Article 19 or, if the project has ended, to demand full or partial repayment of the Community contribution.

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<sup>4</sup> OJ L 8, 12.1.2001, p. 1.

<sup>5</sup> OJ L 145, 31.5.2001, p. 43.

### **Article 23 - Law applicable and competent court**

The Community contribution shall be governed by the terms of the grant agreement, the Community rules applicable and, on a subsidiary basis, by the law of Belgium relating to grants.

The coordinating beneficiary may bring legal proceedings regarding decisions by the Commission concerning the application of the provisions of the grant agreement and the arrangements for implementing it before the Court of First Instance of the European Communities and, in the event of an appeal, the Court of Justice of the European Communities.

## **PART II - Financial provisions**

### **Article 24 - Community financial contribution to the project**

- 24.1 The amount of the Community financial contribution shall be determined by applying the percentage specified in the grant agreement to the eligible costs incurred.
- 24.2 Under no circumstances may the total amount paid by the Commission to the coordinating beneficiary exceed the maximum amount set for the Community contribution in the grant agreement, even if the total actual eligible costs of a project exceed the budget set in the grant agreement.
- The coordinating beneficiary shall ensure that no other direct or indirect European Union funding is used to co-finance the project. If such a situation occurs during implementation of the project the coordinating beneficiary must inform the Commission without delay about the measures it intends to take to comply with its obligation. The independent auditor provided for in Article 31 shall check the sources of the project financing.
- 24.3 Notwithstanding the obligations set in Articles 4.6 and 5.5, the coordinating beneficiary and the associated beneficiaries accept that the Community contribution may not have the purpose or effect of producing a profit. Profit shall be defined as a surplus of receipts over the costs of the project when the request is made for final payment.
- 24.4 Receipts are defined as funds received from the Commission, associated beneficiaries and co-financiers and direct revenues generated, exclusively and directly, by the project (such as participation fees for conferences, sales of timber, etc).
- The coordinating beneficiary must ensure that any receipts generated by and during the implementation of the project shall be counted as direct revenue to the project.
- Such direct revenue shall always be declared and the Commission shall reduce its financial contribution in order to balance total income against total expenses.
- 24.5 Without prejudice to the right to terminate the agreement under Article 19, and without prejudice to the right of the Commission to apply the penalties referred to in Article 27, if an action is not implemented or is implemented poorly, partially or late, the Commission may proportionally reduce the Community contribution initially provided for in line with the actual implementation of the action on the terms laid down in the grant agreement.
- 24.6 The bank account or sub-account used by the coordinating beneficiary must make it possible to identify funds paid by the Commission. If the funds paid to this account yield interest or equivalent benefits under the law of the State on whose territory the account is opened, such interest or benefits shall, if they are generated by pre-financing payments, be recovered by the Commission as specified in Article 24.7.
- 24.7 The coordinating beneficiary shall inform the Commission of the amount of any interest or equivalent benefits yielded by the pre-financing amount it has received from the Commission. This notification must be made when the request for payment of the balance of the grant is made. The interest shall not be treated as

direct revenue for the project and will be recovered by the Commission by offsetting it against the payment of the balance.

In addition, where the pre-financing payment exceeds € 750 000 the interest or equivalent benefits yielded at end of any calendar year will be communicated by the coordinating beneficiary to the Commission by 31 January in the subsequent year. Such interest will be recovered by way of a recovery order.

As an exception, where the pre-financing payment is lower than € 50 000 interest accrued will not be due to the Commission.

Interest yielded by pre-financing paid to Member States is not due to the Commission.

- 24.8 The coordinating beneficiary and its associated beneficiaries, if any, accept that the Community financial contribution shall not constitute a claim on the Commission and may not, therefore, be assigned to any other body or transferred to a third party in any way.

## **Article 25 - Eligible costs**

- 25.1 To be considered eligible, costs must be:

- provided for in the budget of the project or have been authorised through an amendment to the grant agreement;
- directly linked to, and necessary for, carrying out the project covered by the grant agreement;
- reasonable and comply with the principles of sound financial management, in particular in terms of value for money and cost-effectiveness;
- compliant with applicable tax and social legislation; and
- actually incurred during the lifetime of the project, as defined in the grant agreement, be recorded in the coordinating beneficiary's or any associated beneficiaries' accounts or tax documents, and be identifiable and controllable.

A cost shall be considered as incurred during the lifetime of the project when:

- the legal obligation to pay was contracted after the signature of the grant agreement by the Commission;
- the implementation of the corresponding action started after the start date for the project and was completed before the end date (the only exceptions are the cost of the bank guarantee covering the period after the signature of the grant agreement and before the start of the project and for the six months after the project end date and the cost of the independent audit referred to in Article 31); and
- the cost has been fully paid before the submission of the final financial statement of expenditure and income.

- 25.2 Personnel costs shall be charged in respect of the actual time devoted to the project. They shall be calculated on the basis of the actual gross salary or wages plus obligatory social charges and any other statutory costs included in the remuneration, but excluding any other cost. The time, which each employee spends working on the project, shall be recorded on a timely basis using timesheets or an equivalent time registration system established and certified regularly by the coordinating beneficiary / associated beneficiary.

Service contracts with individuals may be charged to this category on condition that the individual concerned works in the coordinating beneficiary's/associated beneficiary's premises and under its supervision and provided that such practice complies with the relevant national legislation. The time which each individual spends working on the project, shall be recorded on a timely basis using timesheets or an equivalent time registration system established and certified regularly by the coordinating beneficiary / associated beneficiary. The eligible cost shall equal the actual payment made to the individual concerned in relation to the project.

Civil servants' salary costs may be funded only to the extent that they relate to the cost of project implementation activities that the relevant public organisation would not have carried out had the project concerned not been undertaken. The staff in question must be specifically seconded to a project and they must represent an additional cost with respect to existing permanent staff. Moreover, the sum of the public organisations' contributions (as coordinating beneficiary and/or associated beneficiary) to the project must exceed (by at least 2 %) the sum of the salary costs of the civil servants charged to the project.

25.3 Travel and subsistence costs shall be charged in accordance with the internal rules of the coordinating beneficiary or associated beneficiary.

25.4 External assistance costs relate to sub-contracting costs (work undertaken by external companies, renting of equipment or infrastructure, etc.).

Costs related to the purchase or leasing (as opposed to renting) of durable equipment, infrastructure or consumables supplied under subcontract shall not be charged to the budget item for external assistance. These costs shall be declared separately under the appropriate budget headings.

The costs of auditing by an independent auditor are charged to this category.

25.5 Depreciation charges relating to durable goods shall be considered only when the durable goods are:

- placed on the coordinating beneficiary's or associated beneficiary's inventory of durable goods,
- treated as capital expenditure in accordance with the tax and accounting rules applicable to the coordinating beneficiary or associated beneficiaries in the project,
- purchased or leased at normal market rates.

25.6 Notwithstanding the specific provisions in Article 25.7 and in Article 25.9, the coordinating beneficiary/associated beneficiary shall apply its internal accounting standard/rules to calculate the eligible depreciation charge, taking into account the type of infrastructure/equipment, the date of its purchase/manufacture/lease, the duration of the project and the rate of actual use for the purposes of the project. The independent auditor as required by Article 31 shall confirm that the actual depreciation charges which are recorded in coordinating beneficiary's / associated beneficiary's accounting systems are reported as project expenses.

However these eligible depreciation charges will be limited to the following ceilings:

- Infrastructure costs: 25% of the total purchase cost;
- Equipment costs: 50% of the total purchase cost.

- 25.7 As an exception to Article 25.6, for projects funded under LIFE+ Environment Policy and Governance and LIFE+ Biodiversity, no ceiling applies to prototypes, for which 100% of the purchase costs are eligible for co-funding.

A prototype is infrastructure and/or equipment specifically created for the implementation of the project and that has never been commercialised and/or is not available as a serial product. The prototype must play a crucial role in the demonstration activities of the project. Only components purchased and used within the life of the project may be declared.

A prototype may not be used for commercial purposes during the life of the project and for five years after the project ends. Should the prototype or any of its components be used for commercial purposes (i.e. sold, leased, rented or used to produce goods or services) during, or within five years from the end of the project, this shall be declared. The costs of creating the prototype shall then be depreciated in accordance with Articles 25.5 and 25.6.

- 25.8 The depreciation charges relating to durable goods acquired before the starting date of the project shall be considered ineligible. Such costs are considered to be included in the "overheads" cost category.
- 25.9 For LIFE+ Nature projects, the costs incurred for durable goods by public authorities or non-governmental / private non-commercial organisations, intrinsically connected with implementation of the project and used to a significant degree within its duration shall be considered eligible in full. Such eligibility shall be subject to the coordinating beneficiary and associated beneficiaries undertaking to continue to assign these goods definitively to nature conservation activities beyond the end of the project co-financed under LIFE+ Nature.
- 25.10 For LIFE+ Nature projects, the costs related to land / rights purchases and leases shall be eligible and shall be accounted for separately from durable goods. The provisions in Article 35 shall apply.
- 25.11 Expenditure on consumable material shall relate to the purchase, manufacture, repair or use of any material, goods or equipment which is:
- not included on the inventory of durable goods of the coordinating beneficiary or associated beneficiaries in the project;
  - not treated as capital expenditure in accordance with the tax and accounting rules applicable to the coordinating beneficiary or associated beneficiaries in the project;
  - specifically related to implementation of the project (however general office consumables/supplies are considered to be included in the "overheads" cost category).
- 25.12 Other costs mean any costs necessary for the project, not falling within a defined category. Expenses listed must be verifiable and not above the actual costs. The costs incurred in effecting the bank guarantee, when required by the Commission, are charged to this category.
- 25.13 Overheads shall be eligible for flat-rate funding of a maximum of 7% of the total amount of eligible direct costs actually incurred, excluding land purchase/lease costs. They need not be supported by accounting documents. They shall be eligible as indirect costs which are intended to cover general indirect costs needed

to employ, manage, accommodate and support directly or indirectly the personnel working on the project.

#### **Article 26 - Ineligible costs**

The following costs shall not be regarded as eligible and therefore are not included by the Commission in the calculation of the total eligible cost:

- any cost incurred for an action which benefits from aid under other Community financial instruments;
- costs incurred in relation to activities not foreseen in the project or to modifications of actions, for which the written additional agreement foreseen in Article 15 was not issued;
- costs incurred for the purchase of durable goods or for the production of communication material, including notice boards and websites, not bearing the LIFE logo (and the Natura 2000 logo, when applicable);
- costs for which a coordinating beneficiary and / or associated beneficiary already receives an operating grant from the Commission during the period in question;
- any costs related to any action that can be considered as a compensatory measure which are the responsibility of a Member State and which are decided in relation to the Birds' and Habitats' Directives;
- costs relating to management plans, action plans and similar plans, drafted or modified in the context of a LIFE+ project, if the related plan is not legally operational before the project end date. This includes the completion, before the project end date, of all procedural/legal steps in Member States where such procedures are foreseen;
- costs in any category of expenditure over and above that foreseen in the budget plus 10% and € 30 000 (as referred to in Article 15.2);
- invoicing between associated beneficiaries and between associated beneficiaries and the coordinating beneficiary;
- costs which result from transactions between departments of associated beneficiaries or of the coordinating beneficiary except where it can be proven that such transactions represent the best value for money and exclude all elements of profit, VAT and overheads;
- exchange rate losses;
- unnecessary or wasteful outlays;
- distribution, marketing and advertising expenses to promote products or commercial activities, except where specifically indicated in the project;
- any provisions for possible future losses or liabilities;
- interest charges;
- doubtful debts;
- financial expenses or costs related to finding / obtaining alternative sources of co-financing;

- entertainment expenses, except such expenses accepted as being wholly and exclusively necessary for carrying out the work under the project;
- any costs relating to other projects financed by third parties;
- assets and services donated, including voluntary work;
- travel and accommodation expenses and any form of remuneration in the name of agents of the Community institutions and of the external monitoring teams;
- investments in major infrastructure;
- fundamental scientific research;
- licence or patent fees or other fees related to the protection of intellectual property rights;
- costs for EMAS and ECOLABEL registration procedures;
- land purchase, if not complying with the conditions set in Article 35.

This list is not exhaustive.

## **Article 27 - Financial penalties**

By virtue of the Financial Regulation applicable to the general budget of the European Communities<sup>6</sup>, any coordinating beneficiary declared to be in grave breach of its obligations shall be liable to financial penalties of between 2% and 10% of the value of the grant in question, with due regard for the principle of proportionality. The coordinating beneficiary shall be notified in writing through a registered letter of any decision by the Commission to apply such financial penalties.

## **Article 28 - Methods of payment**

- 28.1 The financial contribution from the Community shall be paid in two or three instalments.
- 28.2 A first pre-financing payment, equivalent to 40% of the maximum Community financial contribution. This payment is increased to 50% for projects with an implementation period of 24 months or less or a Community contribution of € 300 000 or less. Either contribution will be paid within 45 days of the receipt of:
- the grant agreement signed by both parties;
  - a signed payment request stating the name and address of the coordinating beneficiary, the name and address of the bank, the bank account details, the project reference;
  - depending on the coordinating beneficiary's financial viability as evaluated during the selection phase, a guarantee issued by a bank or an insurance company may be requested by the Commission during the revision phase. This guarantee will equal the amount of the first pre-financing and will cover the duration of the project plus six months. Its validity will be extended in the event of an extension of the project. In exceptional cases this guarantee could be replaced by joint and several guarantees by a third party. The guarantee is to be in the format set out in Annex II.

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<sup>6</sup> OJ L 248, 16.9.2002, p. 1 and OJ L 390, 30.12.2006, p. 1.

- 28.3 A mid-term pre-financing payment, equivalent to 30% of the maximum Community financial contribution, will be paid for projects with an implementation period of more than 24 months and a Community contribution of more than €300 000. This payment will be made on condition that at least 150% of the first pre-financing payment has been consumed (as a percentage of costs incurred) and that the payment has been requested at least nine months before the project's end date. The payment shall be made after the approval, by the Commission, of the inception report, the mid-term technical report and the statement of expenditure and income provided for in Article 12.

In exceptional cases when a first pre-financing has not been paid, the coordinating beneficiary may request a mid-term pre-financing payment on the condition that an amount equivalent to at least 60 % of the maximum contribution foreseen in the Special Conditions has been spent. The amount of this payment will then be determined by applying the percentage specified in the grant agreement to the eligible costs incurred at the date of the mid-term technical report and the statement of expenditure and income.

To approve the mid-term technical report and the mid-term statement of expenditure and make the payment, the Commission shall have 105 days commencing on the date of the receipt of:

- a signed request for payment stating the name and address of the coordinating beneficiary, the name and address of the bank, the bank account details, the amount requested, the project reference number and any reference specified by the coordinating beneficiary to identify payment;
- the official registration number, organisation, name and address of the auditor when required by Article 31;
- the corresponding statement of expenditure and income and the mid-term report (Article 12).

If no comments are received from the Commission by this deadline, the mid-term technical report shall be deemed to have been approved. Approval of the report accompanying the request for payment shall in no way imply the recognition of the regularity or of the authenticity, completeness and correctness of the declarations and of the information they contain.

- 28.4 The balance (final payment) shall be made after the approval, by the Commission, of both the final technical report and the statement of expenditure and income provided for in Article 12.

To approve the final technical report and the final statement of expenditure and make the payment, the Commission shall have 105 days commencing on the date of receipt of:

- a signed payment request stating the name and address of the coordinating beneficiary, the name and address of the bank, the bank account details, the amount requested, the project reference number and any reference specified by the coordinating beneficiary to identify payment;
- the corresponding statement of expenditure and income covering the entire project period and the final report (Article 12);
- an audit report if required by Article 31.

If no comments are received from the Commission by this deadline, the final report shall be deemed to have been approved. Approval of the report accompanying the request for payment shall in no way imply the recognition of the regularity or of the authenticity, completeness and correctness of the declarations and of the information they contain.

- 28.5 The Commission may suspend or reject the payment request within the 105-day period, counting from the date of receipt of the request for payment and the other documents required under Articles 28.2, 28.3 or 28.4. The Commission must give the coordinating beneficiary written notification of suspension.
- 28.6 If the abovementioned payment periods have been suspended, the time remaining shall begin to run again from the date when the additional information required is received.
- 28.7 In case of rejection of either the financial or technical part of the reports, the 105-day period shall begin to run again from the date of receipt of the new reports.
- 28.8 Commission payments shall be made in Euro (€).
- 28.9 All payments shall be made in the name of the coordinating beneficiary to the bank account indicated in Annex VII. Any change of account must be immediately communicated to the Commission.
- 28.10 The payment shall be considered made on the day it is debited from the Commission's bank account.
- 28.11 Without prejudice to possible suspension of the payment period the coordinating beneficiary may be entitled to late payment interest in accordance with Article 106 of the Implementing Rules to the Financial Regulation<sup>7</sup>.
- 28.12 If any amount is unduly paid to the coordinating beneficiary or if recovery is justified under the terms of the agreement, the coordinating beneficiary undertakes to repay the Commission the sum in question on whatever terms and by whatever date it may specify.
- 28.13 In the event of termination of the grant agreement in the cases specified in Article 19 the Commission may request full or partial repayment of sums paid to the coordinating beneficiary. The Commission shall determine the manner and the time limits for such full or partial repayment and will apply a criterion of proportionality.
- 28.14 Should the coordinating beneficiary fail to repay such amounts within the time limit set by the Commission, the Commission may increase the sums due by adding interest at the rate applied by the European Central Bank to its main refinancing operations plus three and a half percentage points. The reference rate to which the increase applies shall be the rate in force on the first day of the month of the final date for payment, as published in the C series of the Official Journal of the European Union.
- 28.15 Bank charges occasioned by the repayment of sums due to the Commission shall be borne entirely by the coordinating beneficiary.
- 28.16 The debit note drawn up by the Commission and transmitted to the coordinating beneficiary owing a repayment to the Commission shall be enforceable within the meaning of Article 256 of the EC Treaty.

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<sup>7</sup> OJ L 111, 28.4.2007, p. 13.

- 28.17 If payment has not been made by the due date, sums owed to the Commission may be recovered by offsetting them against any sums owed to the coordinating beneficiary, after informing him accordingly by registered letter with advice of delivery or equivalent, or by calling in the financial guarantee provided in accordance with Article 28.2. In exceptional circumstances, justified by the necessity to safeguard the financial interests of the Communities, the Commission may recover by offsetting before the due date of the payment. The coordinating beneficiary's prior consent shall not be required.

#### **Article 29 - Statement of expenditure and income**

- 29.1 Statements of expenditure and income shall be submitted on the occasion of mid-term and final reports. They shall cover the same time period as the corresponding technical report.
- 29.2 Statements of expenditure and income shall be presented in accordance with the Guidelines provided by the Commission. One copy shall be transmitted to the Commission and one to the external monitoring team designated by the Commission.
- 29.3 The coordinating beneficiary shall certify that information contained in requests for payment is full, reliable and true, that the financial documents submitted to the Commission comply with the common provisions, that the costs declared are the actual costs and that all receipts have been declared.
- 29.4 Documents justifying expenditure (e.g. invoices) do not have to be annexed to the statement of expenditure and income. The coordinating beneficiary shall, however, if requested, provide the Commission with all details, including invoices, which it might need for evaluation of the expenditure and of the corresponding activity report.
- 29.5 Only the Euro (€) shall be used in the statement of expenditure and income. The coordinating beneficiary or an associated beneficiary having their accounts in other currencies shall convert amounts into Euro using the exchange rate applied by the European Central Bank on the first working day of the year in which the expenditure is paid.

#### **Article 30 - Value added tax**

- 30.1 When the coordinating beneficiary or any of its associated beneficiaries is not in a position to recover the VAT paid under the project, this amount shall be considered eligible expenditure.
- 30.2 For VAT charges to be considered eligible the coordinating beneficiary must prove with legal documents that it and/or its associated beneficiaries must pay and may not recover the VAT for the assets and services required for the project.

#### **Article 31 - Independent financial audit**

- 31.1 An independent auditor, nominated by the coordinating beneficiary, shall verify the final statement of expenditure and income provided to the Commission when the maximum Community contribution set in the Special Provisions exceeds € 300 000.
- 31.2 The auditor shall verify compliance with national legislation and accounting rules and certify that all costs incurred comply with this grant agreement. The auditor

shall also check the sources of the project financing, and in particular that co-financing does not stem from other Community financial instruments. The work to be performed must be in accordance with, and in the format of, the Guidelines provided by the Commission.

#### **Article 32 - Commission financial audit**

- 32.1 The Commission, or any representative authorised by the Commission, may audit a coordinating beneficiary or associated beneficiary at any time during the project implementation period and up to five years after the final payment of the Community contribution, as referred to in Article 28.4.
- 32.2 The audit shall be carried out on a confidential basis.
- 32.3 The Commission or any authorised representative shall have access to the documentation required to ascertain the eligibility of the costs of the participants in the project, such as invoices, payroll extracts, purchase orders, proof of payment, time sheets and any other documents used for the calculation and presentation of costs.
- 32.4 The Commission shall take appropriate steps to ensure that its authorised representatives treat confidentially the data to which they have access or which are provided to them.
- 32.5 The Commission may verify the use made of the Community's financial contribution by the coordinating beneficiary and associated beneficiaries.
- 32.6 Information on the findings of the audit shall be sent to the coordinating beneficiary. The coordinating beneficiary may communicate its observations to the Commission within one month of receiving it. The Commission may decide not to take into account any observations conveyed after the deadline.
- 32.7 On the basis of the conclusions of the audit, the Commission shall take all appropriate measures it considers necessary, including the issuing of a recovery order regarding all or part of the payments made by it.
- 32.8 The Court of Auditors may verify the use made of the Community's financial contribution in the framework of this grant agreement, on the basis of its own procedures.
- 32.9 By virtue of Council Regulation (Euratom, EC) No 2185/96<sup>8</sup> and Regulation (EC) No 1073/1999 of the European Parliament and of the Council<sup>9</sup>, the European Anti-Fraud Office (OLAF) may also carry out on-the-spot checks and inspections in accordance with the procedures laid down by Community law for the protection of the financial interests of the European Communities against fraud and other irregularities. Where appropriate, the inspection findings may lead to recovery decisions by the Commission.

#### **Article 33 - Checks and inspections**

- 33.1 The coordinating beneficiary and the associated beneficiaries undertake to allow Commission staff and persons authorised by the Commission appropriate access to their sites or premises where the project is being carried out and to all

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<sup>8</sup> OJ L 292, 15.11.1996, p. 2.

<sup>9</sup> OJ L 136, 31.5.1999, p. 1.

documents relating to the technical and financial management of the operation. Access by persons authorised by the Commission may be subject to confidentiality arrangements to be agreed between the Commission and the coordinating beneficiary.

- 33.2 Such checks may be initiated up to five years after the final payment as referred to in Article 28.4.
- 33.3 Such checks shall be carried out on a confidential basis.
- 33.4 Coordinating beneficiaries and associated beneficiaries shall provide appropriate assistance to the Commission or its authorised representatives.

#### **Article 34 - State aid**

Any aid granted by the State or through State resources to the project covered by this agreement must comply with the rules laid down in Articles 87 and 88 of the EC Treaty.

#### **Article 35 - Land/rights purchase, land lease**

- 35.1 Costs incurred for land/rights purchases, intrinsically connected with implementation of a LIFE+ Nature project and explicitly envisaged therein, shall be considered eligible in full provided that:
- purchase prices are based on market terms;
  - coordinating beneficiary and associated beneficiaries undertake to continue to assign the purchased assets definitively to nature conservation activities beyond the end of the project co-financed under LIFE+ Nature;
  - for land purchased as provided for in the project, the coordinating beneficiary shall ensure the entry in the land register includes a guarantee that the land will be assigned definitively to nature conservation. If in a given Member State the land register does not exist or it does not provide a sufficient legal guarantee, the coordinating beneficiary shall have a clause for the definitive assignment of the land to nature conservation included in the land sale contract. For countries where it would be illegal to include such a guarantee both in the land register and in the sale contract, the Commission may accept an equivalent guarantee, provided it offers the same legal level of protection in the long term and complies with the requirement contained in Annex I of the LIFE+ Regulation;
  - for land purchased by private organisations, the sales contract and/or its registration in the land register includes a guarantee that the land property will be transferred to a legal body primarily active in the field of nature protection, in case of dissolution of the private organisation or its incapacity to manage the land according to nature conservation requirements. For countries where it would be illegal to include such a guarantee in the land register or sales contract, the Commission may accept an equivalent guarantee provided it offers the same legal level of protection in the long term and complies with the requirement contained in Annex I of the LIFE+ Regulation;
  - in case of land purchased to be exchanged at a later date, the exchange is carried out before the end of the project at the latest and the provisions of the present article shall apply to the lands received through the exchange. The land purchased to be exchanged shall be exempt, at the stage of the mid-term

reporting, from the guarantee that the land will be assigned definitively to nature conservation.

- 35.2 The duration of a land lease shall either be restricted to the project duration or be at least of 20 years and shall be compatible with the needs of habitat and species protection. In the case of long-term lease of land, the lease contract shall clearly include all the provisions and commitments which will permit the achievement of its objectives in terms of habitat and species protection.

| COSTI di ARPA per la realizzazione del progetto   |                   |
|---------------------------------------------------|-------------------|
| costi diretti (personnel, travel e costi esterni) | <b>666.464,00</b> |
| costi indiretti riconosciuti da UE                | 46.652,48         |
| <b>totale</b>                                     | <b>713.116,48</b> |

| Beneficiary short name | Total costs of the actions in | Beneficiary's own contribution in | Amount of EC contributi |
|------------------------|-------------------------------|-----------------------------------|-------------------------|
| ARPA-ER                | 713.116                       | 405.831                           | 307.285                 |

**suddivisione dei costi tra ARPA-SIMC e SEZ Parma**

|           | TOTALE PARMA      | TOTALE SIMC       | DT            | FORLì         |         |
|-----------|-------------------|-------------------|---------------|---------------|---------|
| personnel | 170.731           | 229.397           | 22.320        | 29.946        | 452.394 |
| travel    | 10.035            | 10.035            | 0             | 0             | 20.070  |
| external  | 40.000            | 154.000           | 0             | 0             | 194.000 |
|           | <b>220.766,00</b> | <b>393.432,00</b> | <b>22.320</b> | <b>29.946</b> | 666.464 |

|                                             |                |
|---------------------------------------------|----------------|
| CONTRIBUTO UE                               | 307.285        |
| COSTI ESTERNI (external expertise + travel) | <u>214.070</u> |

**residuo del contributo UE a COPERTURA PERSONALE INTERNO**

**93.215** suddivisi come segue:

| TOTALE PARMA | TOTALE SIMC | DT       | FORLì    |           |
|--------------|-------------|----------|----------|-----------|
| 35.178,83    | 47.266,85   | 4.599,00 | 6.170,32 | 93.215,00 |

| TOTALE PARMA | TOTALE SIMC | DT       | FORLì    |            |
|--------------|-------------|----------|----------|------------|
| 85.213,83    | 211.301,85  | 4.599,00 | 6.170,32 | 307.285,00 |

| PAGAMENTI    | TOTALE PARMA     | TOTALE SIMC       | DT              | FORLì           |            |
|--------------|------------------|-------------------|-----------------|-----------------|------------|
| 1° acconto   | 34.085,53        | 84.520,74         | 1.839,60        | 2.468,13        |            |
| 2° pagamento | 25.564,15        | 63.390,56         | 1.379,70        | 1.851,10        |            |
| saldo        | 25.564,15        | 63.390,56         | 1.379,70        | 1.851,10        |            |
|              | <b>85.213,83</b> | <b>211.301,85</b> | <b>4.599,00</b> | <b>6.170,32</b> | 307.285,00 |

N. proposta: PDEL-2010-79 del 18/10/2010

**Centro di Responsabilità: Sezione Di Parma**

**OGGETTO:** Sezione provinciale di Parma. Presa d'atto dell'approvazione del Progetto "An integrated assessment methodology to plan local cost-effective air quality policies harmonized with national and European actions" (Life OPERA). Approvazione del Grant Agreement sottoscritto con la Commissione Europea per la realizzazione del Progetto.

**PARERE CONTABILE**

Il sottoscritto Dott. Giuseppe Bacchi Reggiani, Responsabile dell'Area Bilancio e Controllo Economico, esprime parere di regolarità contabile ai sensi del Regolamento Arpa sul Decentramento amministrativo.

Data 19/10/2010

Il Dirigente

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