LIFE11 ENV/ES/584

Inception Report

Covering the project activities from

01/10/2012 to 31/05/2013

AIRUSE

30/06/2013

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AIRUSE

Data Project

Project location	Spain, Italy, Portugal, Greece, United Kingdom
Project start date:	01/10/2012
Project end date:	30/09/2016
Total budget	**2,368,719 €**
EC contribution:	**1,138,861 €**
(%) of eligible costs	48.42 %

Data Beneficiary

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2 LIST OF ABBREVIATIONS

Aerosol Mass Spectrometer	AMS
Agenzia Regionale per la Protezione dell Ambiente	ARPA
Calcium Magnesium Acetate	CMA
Greek Ministry of Environment, Energy and Climate Change	MEECC
Inductively Coupled Plasma Atomic Emission Spectrometry	ICP-AES
Inductively Coupled Plasma Mass Spectrometry	ICP-MS
Institute of Environmental Assessment and Water Research - Agencia Estatal Consejo Superior de Investigaciones Científicas	IDAEA-CSIC
Magnesium Chloride	Mg_2Cl
Micro Orifice Uniform Deposit Impactor	MOUDI
National Center of Scientific Research "Demokritos"	NCSRD
North Regional Coordination and Development Commission	CCDR-N
Particulate matter	PM
Particulate matter with aerodynamic diameter <10 μm	PM_{10}
Particulate matter with aerodynamic diameter <2.5 μm	$PM_{2.5}$
Proton Induced X-Ray Emission	PIXE
Quality Assurance Plan	QAP
University of Aveiro	UAVR
University of Birmingham	UB
University of Florence	UNIFI
X-Ray Fluorescence	XRF

3 EXECUTIVE SUMMARY

3.1 General progress

The AIRUSE activities started on 1 October 2012 with the signature of the Grant Agreement. This report concerns the actions implemented until 31 May 2013 covering an 8 months period. The main tasks initiated or accomplished during this period are as follows:

- Preparation, finalization and signing of the partnership agreement by all beneficiaries
- Enquire and receive of the first payment
- Design, setup and launch of the project website
- Design of the measurement studies campaigns and setting the specifications for equipment procurement
- Source apportionment results from past studies in the study area
- Preparation of the PM databases in the study area
- Meetings with the regional and national authorities in all participating countries concerning air quality strategies and plans and the selection of the mitigation measures to be tested
- Start of the sampling campaigns in the 4 cities: Barcelona, Oporto, Florence, Athens
- Determination of the traffic source contribution on PM levels in Barcelona
- Test the effectiveness of two dust suppressants (CMA and Mg_2Cl) to reduce road dust resuspension
- Several dissemination activities presenting the project (press releases, TV, radio, conferences)
- Networking with other LIFE projects (established collaboration with MED-PARTICLES, ACCEPT-AIR, CMA+, DIAPASON)

3.2 Assessment as to whether the project objectives and work plan are still viable

A considerable effort has been undertaken on launching the project on time and not delaying any of its actions. Furthermore, 2 actions (B.6 Determination of the impact of traffic and B.7 **Testing of air mitigation measures - Development of air mitigation strategies**) started before the scheduled date to avoid any delays dealing with unfavourable weather conditions. A detailed picture of the actions' progress will be given below. All these lead to the conclusion that the project work plan is viable and the objectives and deliverables of the project will be accomplished.

3.3 Problems encountered

There have not been reports by the beneficiaries on problems encountered.

4 ADMINISTRATIVE PART

4.1 Description of project management

The implementation of the project AIRUSE LIFE11 ENV/ES/584 was initiated by the coordinating beneficiary IDAEA-CSIC on October 2012. The project kick-off meeting was organized on the 29th of October 2012, at the premises of the Agencia Estatal Consejo Superior de Investigaciones Científicas, CSIC in Barcelona, where representatives of all five associated beneficiaries attended. Except from the beneficiaries a representative from the regional Government of Catalonia (Spain) also participated and presented the air quality plan of Barcelona and also the Regional Office for Environmental Protection, ARPA attended and discussed air quality issues in Milan (Italy).

The agenda of the meeting included the presentation of the project, a comprehensive presentation of Life+ Common Provisions and key issues concerning reporting and other obligations to the European Committee. In addition, each beneficiary gave a short presentation on their specific field of work in the framework of the project, while the coordinating beneficiary discussed further the necessary steps to take the following months.

The main issues raised were the following:

(1) the preparation of the partnership agreement, which was signed by all beneficiaries;

(2) the financial management of the project, where all the procedures to be followed were given in detail;

(3) technical issues regarding PM sampling/analysis, source apportionment methods and the mitigation measures to be tested.

The meeting programme, minutes, list of participants and photos are included in ANNEX I. All information, including participants, presentations have been uploaded at project´s website.

Following the kick-off meeting, the coordinating beneficiary assigned, in collaboration with the associated beneficiaries, the members and responsibilities of the management team, presented below in paragraph 4.2.

The second plenary meeting was scheduled for June 10th, again at the premises of IDAEA-CSIC in Barcelona. Mrs. R. Navarrete, representative of the Astrale Monitoring Team, was attended, in the framework of the yearly routine control of the project progress.

4.2 Management team and structure

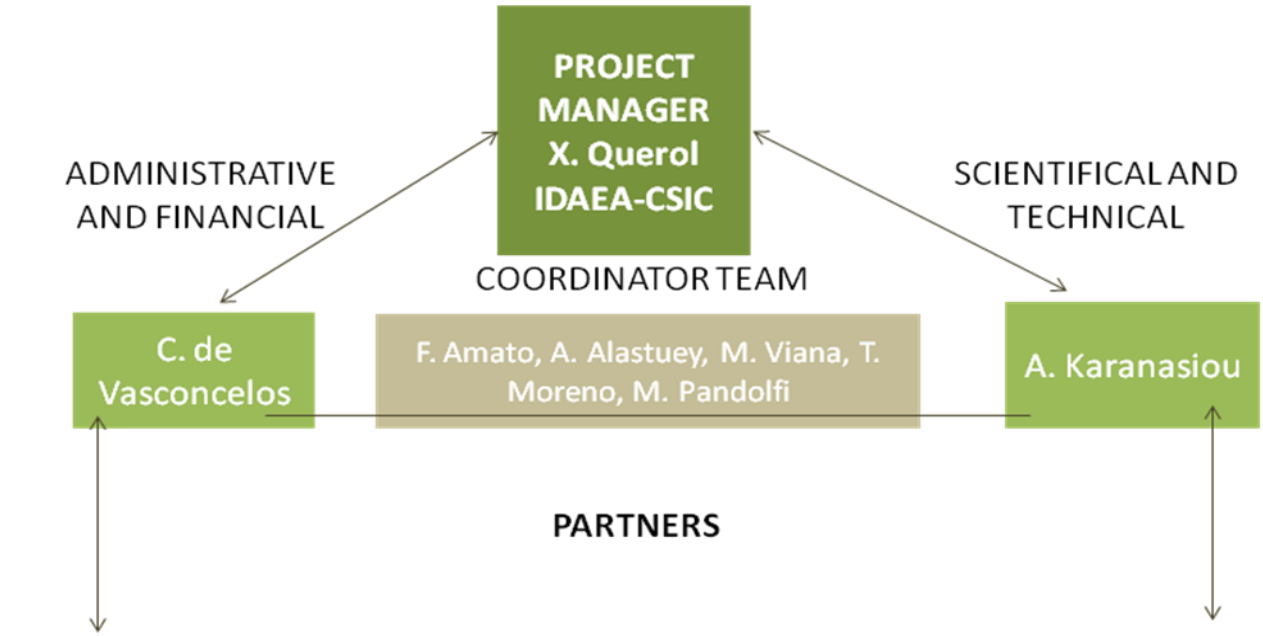
The management of the project is the responsibility of IDAEA-CSIC with the participation of members from all beneficiaries and is carried out at three different levels: strategic, operational and action group level.

The management of the project is the responsibility of the Project Management Team, including:

- ✓ The Project Manager (strategic level)
- ✓ Scientific and technical management (operational level)
- ✓ Administrative and financial management (operational level)
- ✓ Monitoring of the project progress (operational level)
- ✓ Management of Dissemination actions (operational level)
- ✓ The Dissemination team (action group level)

The overall management structure is shown in Figure 1.

The main tool and method for the project management is the Quality Assurance Plan (QAP), prepared by the coordinator on November 2012. The QAP is given in ANNEX II.



AICE-ITC	UNIFI	UB	NCSRD	UAVR
E. Monfort, I. Celades, A. Bengochea	F. Lucarelli, S. Nava, G. Calzolai,	RM Harrison, D. Beddows, JM Delgado	K. Eleftheriadis, L. Diapouli, S. Vratolis, M. Gini, S. Dalaina	C. Alves, C. Pio, T. Nunes

Figure 1. **Organization chart** - Project Management Team

4.3 Partnership agreements status (incl. date of signature) and key content

The partnership agreement has been signed by all beneficiaries on the 13th of November 2012. Subsequently, the first payment has been paid to all associated beneficiaries, according to the payment scheme set at the partnership agreement. The partnership agreement determines the role and obligations of each beneficiary, the respective financial contributions (own and from the EC) and a specific payment scheme for the beneficiaries. A copy of the partnership agreement is included in **ANNEX III**.

5 TECHNICAL PART

The project is progressing in complete accordance with the foreseen actions timetable, without any delays. The activities performed until the end of the reporting period are related to actions A1, B1, B2, B3, B4, B5, B6, B7, C1, D1, D2, D3, D4, E1, E2, E3.

5.1 Actions

5.1.1 Action A1 Authorities and stakeholders consultation

This action started from the first month of the project as it was scheduled. During this action several meetings took place with the national and regional authorities of Spain, Portugal, Italy and Greece concerning the air quality strategies implemented by the national authorities and the mitigation measures that they are interested to test.
The meetings that took place include:

-Meeting at the Department of Territory and Sustainability, Generalitat de Catalunya, Spain

Dr. Xavier Querol and Dr. Angeliki Karanasiou (IDAEA-CSIC) met with Isabel Hernández and Albert García from the Department of Territory and Sustainability Generalitat de Catalunya. The meeting took place at the premises the Department of Territory and Sustainability Generalitat de Catalunya on December 5, 2012. The objective of the meeting was to collect information about the most effective air quality measures in Barcelona, its metropolitan area and Catalonia. To that end, a first draft of a survey was discussed. A summary of the Barcelona Air Quality Plan was prepared and the questionnaire concerning mitigation measures was filled.

-Meeting at the Madrid City Hall, Madrid with the Madrid City Council and the Ministry of Agriculture, Food and Environment, Spain

On December 13, 2012 the Coordinator Dr. Xavier Querol and Dr. Angeliki Karanasiou IDAEA-CSIC, had a meeting in Madrid Town Hall with the technical staff of the Madrid City Council and the Ministry of Agriculture, Food and Environment where they presented the AIRUSE project and discussed the mitigation measures currently applied in local (Madrid area) and national level (Spain). The Madrid City Council expressed interest in testing mitigation measures concerning domestic biomass burning emissions and road dust. A questionnaire concerning mitigation measures was circulated and filled by the technical staff of the Madrid City Council and the Ministry of Agriculture, Food and Environment.

-Meeting with the North Regional Coordination and Development Commission of Portugal

Partner UAVR had a meeting with the North Regional Coordination and Development Commission (CCDR-N) of Portugal to discuss the Air Quality Plan of Porto while a questionnaire concerning mitigation measures was filled by the technical staff of CCDR-N.

- Meeting with the Greek Ministry of Environment, Energy and Climate Change (MEECC)

NCSR "Demokritos" met with representatives of the Greek Ministry of Environment, Energy and Climate Change (MEECC) in order to inform the Ministry on the initial work progress on AIRUSE project and request some information with respect to the current status of air quality management. The meeting took place at the Ministry's premises, on the 20th of February 2013. Following this first meeting, Mr. Adamopoulos and Mrs. Tsilibari, from the Department of Air Quality of MEECC, have completed a questionnaire provided by NCSR "Demokritos", regarding the air quality control measures currently applied by the Greek authorities.

-Meeting with the Regional Office of Air Pollution Control in Florence, Italy

Partner UNIFI had a meeting with the Regional Office of Air Pollution Control in Florence to discuss the Air Quality Plan while a questionnaire concerning mitigation measures was filled.

Minutes of the meetings, a signed list of participants as well as the filled questionnaires is given in ANNEX IV.

In the proposal it is mentioned that in each country two meetings would take place between the beneficiaries and the national authorities. This was the case only for Spain where the two meetings happened in a regional level with the Government of Catalonia and in a local and national level with the Madrid City Council and the Spanish Ministry of Agriculture, Food and

Environment. In the cities of Florence, Oporto and Athens only one meeting was done. However, the main goals of these meeting:

- to present the project to the local national authorities
- to establish collaboration with the authorities and
- to summarize the mitigation measures being used
- to select mitigation measures to be tested were succeed in the first meeting.

Therefore it was decided that no more meetings were necessary to complete Action A1.

5.2 Action B.1 Documentation of the current status

This action aims to 1) catalogue/describe previous source apportionment studies in urban areas of South European countries (Portugal, Spain, Italy and Greece);
2) identify gaps and omissions in these previous conducted studies;
3) recommend priorities with regards the emission sources in urban areas of Southern Europe.
From month 3 of the project the beneficiaries from Spain, Portugal, Italy and Greece conducted a review on previous studies concerning emission sources. Following strict quality control procedures, the collected data are introduced in 4 historical databases, which will be completed by June 2013 as foreseen. The literature review is given in ANNEX V.

5.3 Action B2 Harmonization of source apportionment and priorisation of pollution sources

The overall objective of this activity is to harmonize and improve the procedures followed by different countries in Southern Europe concerning the quantification of emission sources.
A common measurement protocol was developed for all four studied cities (Porto, Barcelona, Florence and Athens). The protocol includes 24-hr sampling (00:00 – 00:00) of PM_{10} and $PM_{2.5}$, conducted simultaneously in the four cities, every third day. The campaigns started on January 2013 and will last for one year. In the collected samples the following components are being determined:

- ✓ PM10 and PM2.5 mass concentration by gravimetry
- ✓ Major elements and trace elements by a combination of methods PIXE, XRF, ICP-MS, ICP-AES
- ✓ Water soluble ions by IC

Elemental and organic carbon by thermal/optical analysis

The Streaker sampler has already been employed in the sampling sites in Oporto (January-February 2013) and in Florence (February 2013). In ANNEX VI a description of the sampling sites, the equipment used and employed methods is given.

- In the kick-off meeting it was decided to change the frequency of the sampling from every day (as it was mentioned in the proposal) to 1 sampling every three days. The coordinator and the beneficiaries concluded that in this way sufficient number of samples on representative days can lead to robust results
- In the proposal the site for Athens is Maroussi station but eventually a different site was selected due to technical problems (electricity failure). Beneficiary NCSRD is conducting the PM sampling campaign in the monitoring station located in the premises of the National Centre of Scientific Research "Demokritos". This change did not cause any delays or problems in the scheduled program.
- The progress of this action is following the established timetable and for the next reporting period the sampling campaigns and the chemical analysis would have completed. Also all the short-term campaigns with the Streaker sampler will have conducted since the Streaker campaign in Athens is planned for June-July 2013. The mini-AMS will be employed in Barcelona during August 2013.
- The first objective of this action is to harmonize the source apportionment method in SE. This has almost been achieved as the same sampling protocol is being used by all cities and the same receptor model will be used in all databases. The second objective which is to quantify the emission sources will be achieved by the end of this action, June 2015 according to the initial timetable.
- All the deliverables of this action will be delivered on time. These consist of:
  - ✓ Training material for the technical staff to be delivered by 31/8/2013
  - ✓ 4 updated PM databases for Southern Europe to be delivered by 31/12/2014
  - ✓ Chemical profiles for emission sources to be delivered by 31/12/2014

5.4 Action B.3 Determination of the impact of natural sources (African dust, marine aerosol)

Action B3 focuses on Saharan dust and sea spray as two major and frequent contributions in ambient PM mass concentrations. These two contributions will be thoroughly characterized and the methodology for subtraction carefully validated.

From the beginning of the project the involved cities Porto, Barcelona, Florence and Athens register the African dust intrusions and the PM mass levels during those episodes. Additionally

from April 2013 the information regarding the expectancy of dust episodes is collected by NCSR "Demokritos" and communicated by email to all other involved partners, in order to organize the additional sampling when necessary. Three prognostic tools are being used: i) the Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) Model, ii) the Barcelona Supercomputing Centre (BSC) - DREAM8b v2.0 Atmospheric Dust Forecast System and iii) the Skiron forecast model of the National and Kapodistrian University of Athens. During each measurement day PM_{10} and $PM_{2.5}$ samples are collected on Teflon filters to be analysed by PIXE by beneficiary UNIFI.

No problems or delays have been reported for this action

The progress of this action is following the established timetable and for the next reporting period the chemical analysis of the African dust PM samples would have completed.

- This action does not include any deliverables. The milestones of the action will be accomplished by the scheduled deadline, 31-12-2014 and include the:
  - ✓ Determination of the impact of natural sources deadline
  - ✓ Assess uncertainty of natural dust contribution deadline

5.5 Action B4. Determination of the impact of biomass burning

To accurately determine the impact of biomass burning it is essential to obtain the chemical characterization and screening of emission profiles for this specific source. Particle emissions from the residential combustion in traditional appliances (fireplace and woodstove) of the most prevalent wood species in Portugal have been made by UAVR. Based on information provided by the AIRUSE partners, additional wood species widely used as bio-fuels in residential combustion in Southern European countries were burned. A detailed report on the emission profiles of biomass fuels is given in ANNEX VII. In the framework of this action, we decided to test two additional biofuels not mentioned in the initial proposal: almond shells and olive pits. After the meeting of the coordinator (IDAEA-CSIC) with the Madrid City Council we realised that these bio-fuels are commonly used in Southern Europe as a result of the economic crisis.

- No problems or delays have been reported for this action

The progress of this action is following the established timetable and for the next reporting period the emission profiles for biomass burning and 4 updated chemical composition databases for the typical urban sites in Southern Europe including biomass burning tracers will be completed

- The Milestone "Identification of biomass burning tracers" was accomplished and the deliverables of the action would be completed on time.

5.6 Action B.5 Determination of the impact of industrial sources

This action seeks to determine the impact of industrial emission sources, in terms of channelled emissions and especially diffuse emissions.

This action started from month 2 of the project with the preparation of a questionnaire concerning industrial emissions. The information provided by the beneficiaries (see ANNEX IV questionnaires) was put together by partner AICE-ITC and a summary report is being prepared.

A short delay was reported by AICE-ITC in receiving the information from beneficiaries UNIFI and NSCRD but this did not cause any significant delay in the time Schedule of action B5.

The progress of this action is following the established timetable and for the next reporting period report on industrial emissions in SE will be prepared

The deliverables of the action will be completed on time

5.7 Action B.6 Determination of the impact of traffic related sources

The impact of traffic-related sources will be determined at the 4 cities Porto, Barcelona, Florence and Athens by means of a multi-steps approach.

- This action has been started earlier than the scheduled timetable in combination with action B7. On April 2nd a sampling campaign began in a traffic site in Barcelona (Valencia 445), where a mobile unit equipped with state of the art equipment was installed.
- No problems have been reported
- The progress of this action is advanced than the initial timetable
- For the next report all deliverables of this action will be completed

5.8 Action B.7 Testing of air mitigation measures - Development of air mitigation strategies

This action focus in the reduction of the mineral, road dust levels. The coordinating beneficiary IDAEA-CSIC and associated beneficiary UB have selected the mitigation measures to be tested depending on their suitability for Southern Europe.

- This action has been started earlier than the scheduled timetable in combination with action B7. On April 2nd a sampling began in 4 traffic sites in Barcelona, where 4 mobile units equipped with state of the art equipment were installed. During the period April-May 2013 two dust suppressants namely CMA and Mg_2Cl were tested and evaluated. Additionally beneficiary UB provided two MOUDI impactors: one of them was installed

in one of the mobile units and the second one in the urban background site in Barcelona, Palau Reial. Also 2 streaker samplers provided by beneficiary UNIFI were deployed in two mobile units. Details of this campaign are given in ANNEX VIII

- No problems have been reported.
- This action started before the scheduled timetable. In the proposal it is said that this action would start on July 2013 but it actually started on 2nd April 2013 where two mitigation measures concerning road dust resuspension were tested in Barcelona from April, 2 to June, 10 2013. This was done because the instrumentation (air quality monitoring mobile units and the vehicle for the dispersion of dust suppressants) needed for Action B7 was only available during the specific period.

Moreover additional equipment was used in this action not mentioned in the proposal such as the MOUDI sampler provided by beneficiary UB. This was done to make best use of the instrumentation of its partner so to determine the detailed size distribution of airborne particulate matter. This will help us to better identify the emission sources and observe the effect of the tested mitigation measures.

- The milestone "Test mitigation measures for emission sources" has been accomplished. For the next report all deliverables of this action will be completed.

5.9 Action B.8 Applicability of selected measures from Northern to Southern Europe

The first literature review is being undertaken for the Action B8 ('Applicability of Mitigation Measures from Northern to Southern Europe'). The first two draft mitigation reports will be on the efficacy of street cleaning to reduce PM_{10} and $PM_{2.5}$ followed by an overview of the procedures and efficacy of the application of dust suppressants to control road dust.

The initial review of the peer reviewed literature suggests that there is little information on the effect of street cleaning on emissions of PM_{10}/$PM_{2.5}$.

5.10 Action C.1 Effectiveness of the project actions

The implementation actions of the project (B actions) will lead to a measurable improvement of the environmental problem targeted. Through Action C1 the project and its impact on PM levels is evaluated on a regular basis.

- The indicators set by the management team will assess the progress of the project against the initial situation. These indicators include:
  - ✓ The initial situation regarding PM10 and PM2.5 levels and sources that will be documented during Action B1

- ✓ The number of excedances of PM10 and PM2.5 limit values during the project
- ✓ The contribution of biomass burning. The results of the combustion tests conducted during Action B4 will enable to quantify how much emission estimates will change as a result of the adoption of the abatement strategies
- ✓ The contribution of traffic related sources. The results of the tests conducted during Action B7 to reduce the road dust resuspension can quantify resuspension and evaluate the tested mitigation measures.
- ✓ The contribution of industrial sources. During Action B5 measures for the reduction of industrial emissions will be proposed and their quantitative effect on PM10 and PM2.5 levels will be determined.

- No problems have been reported
- The progress of this action is following the initial timetable
- The scheduled deliverable, report on policy effectiveness of the Project will be completed during the last year of the project.

5.11 Action C.2 Assessment of the socio-economic impact of the project

This action has not started yet as scheduled in the proposal's timetable

5.12 Action D.1 Project's website

The website of the Project was launched on October 1rst 2012, www.airuse.eu with the LIFE+ logo and mentioning the Community support. The site is updated in a 2-week basis and includes all news, events, workshops and conferences that AIRUSE is presented and AIRUSE representative participate. Details on the sampling campaigns and the mitigation measures being tested are also available on the website. Dissemination material like presentations, reports, informative documents is also available. A section called upcoming events announces the events organized by AIRUSE. For the moment the website is available only in English but all languages (Spanish, Portuguese, Italian and Greek) will be included during the next reporting period.

5.13 Action D.2 LIFE+ Information boards

This action started on time. On March 2013 beneficiary NSCRD drafted and sent to all beneficiaries an illustrative poster presenting the project. The poster is bilingual, the left side is in English while the right side in the beneficiaries languages (Spanish, Portuguese, Italian and Greek). After the input of all beneficiaries and the external assistance (Raquel Navarrete) the

poster was printed and set in the premises of the beneficiaries and in the sampling sites. In ANNEX IX the format is given and photos of the poster set are shown. A short delay occurred in drafting the poster.

5.14 Action D.3 Networking-Open forum with key stake holders

From the first month of the project several meetings were done with key stake holders from the state and local authority policy makers, where the project was presented. These include:

- 2013-2-4: Meeting at the Ministry of Environment, Athens, Greece
- 2012-12-18: Meeting with the North Regional Coordination and Development Commission of Portugal
- 2012-12-13: Meeting at Ministry of Agriculture, Food and Environment, Spain
- 2012-12-13: Meeting at Madrid Town hall, Ayuntamiento de Madrid
- 2012-12-05: Meeting at the Department of Territory and Sustainability, Generalitat de Catalunya
- 2013-1-13: Beneficiary UB attended Greater London Authority workshop on the efficacy of the application of dust suppressants on reducing PM_{10} concentrations at hotspots in London and other mitigation measures.

A summary of these meetings is given in ANNEX X

- A public event, "Urban Air Quality: The Challenge of Non-Exhaust Emissions from Traffic" is organized by AIRUSE coordinator to take place in Barcelona on July 10-11, 2013 with the participation of experts and European stake holders. Around 50 persons will attend this workshop. In the ANNEX XI the leaflet of the workshop is given
- The progress of this action is following the schedule while the deliverable Minutes of the Open-Forum will be completed by the next report.

5.15 Action D.4 Dissemination of project's results

Dissemination of the project results will be achieved through communication processes and media products to support effective policy making and public participation geared towards environmental sustainability.

From the first month of the project AIRUSE was presented in several events and workshops

2012-9-21: Presentation of AIRUSE in "Retos para la mejora de la calidad del aire" at Escuela Politécnica Superior Campus de Huesca (presentation of A. Karanasiou is given in ANNEX XII)

- Meetings with the national authorities and stakeholders (mentioned in 5.1.14, ANNEX X)
- 2012-12-04: Presentation at the National Congress for the Environment On 4 December 2012, Xavier Querol presented the AIRUSE project during a GT-5 session called "Calidad del aire: propuestas para mejorar su evaluación y gestión" at the National Congress for the Environment (CONAMA, Congreso Nacional de Medio Ambiente). Mr. Querol invited the attendees to participate in AIRUSE in order to select and validate means to improve air quality. (ANNEX XIII)
- 2013-3-8: Presentation of AIRUSE in the Med-Particles Workshop in Barcelona (ANNEX XIV)
- 2013-5- 10: Presentation of AIRUSE in LIFE+ Networking event in Valencia (ANNEX XV)

Press and media releases (included in ANNEX XVI)

- 2013-04-18: Video and newspaper article in the national daily newspaper "El Periódico"
- 2013-04-18: Video: Pilot project to reduce re-suspension AIRUSE LIFE+ activities were shown during a segment on the regional Catalan news station BTV.
- 2013-04-18: AIRUSE on Regional Catalan TV A segment of the environmental TV show "Espai Terra" on "Televisió de Catalunya" featured AIRUSE LIFE+.
- 2013-04-08: AIRUSE on National Spanish TV AIRUSE LIFE+ activities were shown during a news segment on Channel 1 of the National Spanish TV, TVE1.
- 2013-03-04, 2013-5-: 2 Articles in EU-focused "The Parliament" magazine features AIRUSE
- 2012-12-14: AIRUSE on National Spanish TV A documentary featuring AIRUSE LIFE+ activities was released on Spanish National TV.

Events organized

The workshop "Urban Air Quality: The Challenge of Non-Exhaust Emissions From Traffic" is organized by AIRUSE coordinator to take place in Barcelona on July 10-11, 2013, (see 5.1.14, ANNEX XI)

AIRUSE leaflet

Beneficiary AICE-ITC drafted a leaflet presenting the AIRUSE project that will be further edited by the coordinator and all partners (ANNEX XVII)

Conferences

AIRUSE beneficiaries will present the project and its results in the European Aerosol Conference, 2-6 September, 2013 in Prague (the abstracts are given in the ANNEX XVIII)

- Nava S., G. Calzolai, M. Chiari, F. Lucarelli, A. Karanasiou, X. Querol, C. Alves, T. Nunes, C. Pio, K. Eleftheriadis, D. Beddows and R.M. Harrison, Study of the aerosol elemental composition with high time resolution: preliminary results from the AIRUSE LIFE+ Project
- Karanasiou A., F. Amato, T. Moreno, A. Alastuey, M. Viana, F. Lucarelli, S. Nava, G. Calzolai, C. Pio, C. Alves, T. Nunes, K. Eleftheriadis, E. Diapouli, E. Monfort, I. Celades Lopez, R.M. Harrison, D. Beddows and X. Querol. Overview of the AIRUSE project: Testing and Development of air quality mitigation measures in Southern Europe
- F. Amato, A. Karanasiou, A. Alastuey, T. Moreno, F. Lucarelli, S. Nava, G. Calzolai, M. Chiari, M. Keuken and X. Querol. Evaluation of CMA as dust suppressant in Barcelona: Preliminary results from the AIRUSE LIFE+ Project
- Another abstract has been submitted to the "10ª Conferência Nacional do Ambiente", which will be held from 6 to 8 November 2013 in Aveiro:
- E. Vicente, T. Nunes, C. Alves, L. Tarelho, A. Calvo, S. Rocha, M. Duarte. "Influência das condições operatórias na emissão de partículas da combustão doméstica". 10ª Conferência Nacional do Ambiente, Aveiro, Portugal, November 2013.

5.16 Action D.5 Laymans Report

This action has not started yet as indicated in the timetable

5.17 Action E.1 Project management

Described in section 3.1. The first deliverable the inception report was prepared on time. The next report to be delivered is the mid-term report on 31rst May, 2014. In the proposal a progress report was foreseen for 31rst October 2013 but this report will be omitted since it is not necessary to submit a report 4 months after the inception report. A progress report will be submitted on 31rst May, 2015 while the final report by December 2016.

5.18 Action E.2 Monitoring of the project progress

The progress of the project actions is monitored and evaluated by the coordinating beneficiary. The responsible person is Angeliki Karanasiou as shown at the organization chart of the project management. She works closely with all beneficiaries communicating by e-mail and phone calls,

controlling the progress of the foreseen deliverables and milestones (2 summary reviews on projects progress are given in ANNEX XIX)

5.19 Action E.3 Networking with other projects

The project has established collaboration with the following LIFE projects
ACEPT-AIR, LIFE 09 ENV/GR/000289
CMA+, LIFE07 ENV/A/000003
DIAPASON, LIFE10 ENV/IT/000391
MED-PARTICLES, LIFE10 ENV/IT/000327
The experts' workshop is organized and will take place in Barcelona the second day (July 11, 2013) of the workshop "Urban Air Quality: The Challenge of Non-Exhaust Emissions from Traffic"

5.20 Action E.4 After LIFE+ communication plan

This action has not started yet.

Table 1 depicts the Gantt chart for the whole lifecycle of AIRUSE project with the proposed, actual and upcoming Tasks (as designed to the following legend).

Proposed
Actual
Upcoming

Table 1. AIRUSE Gantt chart

			2012	2013				2014				2015				2016			
Number	Name of the action		IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	Overall project schedule and management	Proposed			X				X				X						X
		Actual																	
A.1	Authorities and stakeholders consultation	Proposed																	
		Actual																	
B.1	Documentation of the current status	Proposed																	
		Actual																	
B.2	Harmonization of source apportionment and priorization of pollution sources	Proposed																	
		Actual																	
B.3	Determination of the impact of natural sources (African dust, marine aerosol)	Proposed																	
		Actual																	
B.4	Determination of the impact of biomass burning	Proposed																	
		Actual																	
B.5	Determination of the impact of industrial sources	Proposed																	
		Actual																	
B.6	Determination of the impact of traffic related sources	Proposed																	
		Actual																	
B.7	Testing of air mitigation measures - Development of air mitigation strategies	Proposed																	
		Actual																	
B.8	Applicability of selected measures from Northern to Southern Europe	Proposed																	
		Actual																	
C.1	Effectiveness of the project actions	Proposed																	
		Actual																	
C.2	Assessment of the socio-economic impact of the project	Proposed																	
		Actual																	
D.1	Project website	Proposed																	
		Actual																	
D.2	LIFE+ Information boards	Proposed																	
		Actual																	
D.3	Networking-Open forum with key stake holders	Proposed																	
		Actual																	
D.4	Dissemination of project results	Proposed																	
		Actual																	
D.5	Production of Layman's Report	Proposed																	
		Actual																	
E.1	Project Management and Audit	Proposed																	
		Actual																	
E.2	Monitoring of the project progress	Proposed																	
		Actual																	
E.3	Networking with other projects	Proposed																	
		Actual																	
E.4	After-LIFE+ Communication Plan	Proposed																	
		Actual																	

5.21 Envisaged progress until next report (midterm report)

The upcoming reporting period 1st June 2013- 31st May 2014 foresees the following activities:

Action B1. Documentation of the current status

- B1 will be completed until the midterm report. The deliverable **"**Review on contribution of emission sources" will be submitted on 30th June 2013.

Action B2. Harmonization of source apportionment and priorisation of pollution sources

- Completion of the sampling campaigns in the 4 sites (Barcelona, Oporto, Florence, Athens
- 50% of the collected samples will be chemically analyzed
- The deliverable "Training material for the technical staff" will be submitted by 31rst August 2013

Action B3. Determination of the impact of natural sources (African dust, marine aerosol)

- Determine the chemical composition of PM samples during African dust episodes

Action B4. Determination of the impact of biomass burning

- Characterize the emissions of different biomass fuels and submit the deliverable "Emission profiles for biomass burning" by 31st May 2014

Action B5. Determination of the impact of industrial sources

- Characterize the emissions of different industries

Action B6. Determination of the impact of traffic related sources

- Calculate the contribution of traffic in the four cities (Oporto, Barcelona, Florence, and Athens) and submit the deliverable "Report on traffic sources contribution" by 31st December 2013.

Action B7. Testing of air mitigation measures - Development of air mitigation strategies

- Analyse the results from the campaign in Barcelona where 2 dust suppressants (CMA, Mg_2Cl) were tested

Action B8. Applicability of selected measures from Northern to Southern Europe

- Two draft mitigation reports will be prepared on the efficacy of street cleaning to reduce PM_{10} and $PM_{2.5}$ followed by an overview of the procedures and efficacy of the application of dust suppressants to control road dust

5.22 Action C.1 Effectiveness of the project actions

Continuous monitoring of the indicators

Action D1. Project website

- The website will be translated in the beneficiaries' languages and will be continually updated with all news, events, dissemination activities and results of the project.

Action D2. LIFE+ Information boards

- This action is completed as all information boards have been placed in the implementation area of the project

Action D3. Networking-Open forum with key stake holders

- Organize the Open-forum and deliver the minutes by 31st December 2013

Action D4. Dissemination of project results

- Continuous dissemination of projects results in conferences, media and press

Action E1. Project Management and Audit

- Submission of the midterm report

Action E2. Monitoring of the project progress

- Submission of all 3-month reports on the progress of the project

Action E3. Networking with other projects

- Collaboration with other projects

6 FINANCIAL PART

6.1 Putting in place of the accounting system

A cost centre electronic spreadsheet has been created and is continually updated by the Financial Manager of the project. Inputs are collected and registered in the cost centre as soon as they are available by the coordinating beneficiary's Finance Department. Inputs by the associated beneficiaries are collected every three months. All cost items are available at the respective Finance Departments of the coordinating and associated beneficiaries. All original items are stamped by a unique LIFE+ signature. Copies of all above items are filed and are available for inspection at the project's Finance Manager's Office.

6.2 Costs incurred (summary by cost category and relevant comments)

A first review of the project and its budget have been made, and it appears clear that no major changes are necessary and the project is fully feasible as planned with only minor budget adaptations that do not exceed the 10% of the total budget and 30000 € rule. In table 2 the first column represents the initial budget breakdown while the minor changes are also depicted and the so far incurred costs. These minor changes were considered by 2 of the partners: IDAEA-CSIC (coordinator) and N.C.S.R. DEMOKRITOS and they include the transfer from personal, consumables, travel to other costs and overheads costs.

As for IDAEA-CSIC, adjustments were made from personnel to both external assistance and other costs. Due to lab costs, which were considered as personnel in the first place, but actually are internal laboratory charges (please see ANNEX XX document with justification) there has been an 18.000€ transference from personnel to other costs. Again for IDAEA-CSIC it had not been considered any external consultancy for the website management. This turned out to be indispensable and so 8.000€ were transferred from personnel to external assistance.

Regarding N.C.S.R. DEMOKRITOS changes, result from the adjustment of all costs to allow overheads to be considered. The final value to be financed remains untouched. All the budget categories were adjusted (reduced) to result in a 7% overheads category. This was not considered in the original budget for an administrative error, now being corrected.

Table 2. Budget breakdown with the adjustment and the costs incurred

Budget breakdown categories	Total cost in €	chages to GA budget	Costs incurred from 01/10/2012 to 31/05/2013 in €	% of total costs	Budget adjustment
1. Personnel	1.797.752	1.753.131	268.694	15,33%	-44.621
2. Travel and subsistence	115.975	109.375	7.416	6,78%	-6.600
3. External assistance	13.000	21.000	0	0,00%	8.000
Infrastructure	0	0	0		
Equipment	33.000	37.500	19.500	52,00%	4.500
Prototype	0	0	0		
5. Land purchase / long-term lease	0	0	0		
6. Consumables	249.952	245.952	26.252	10,67%	-4.000
7. Other Costs	59.255	75.355	5.365	7,12%	16.100
8. Overheads	99.785	126.406	22.906	18,12%	26.621
TOTAL	**2.368.719**	**2.368.719**	**350.134**	**14,78%**	0

Table 3. Budget breakdown per action

Action number and name	Foreseen costs	Spent so far	Remaining	Projected final cost
Action A1 "Contacts with stakeholders"	5.570	4.784	786	4.784
ActionB1 "Documentation of the current status "	41.213	29.637	11.576	29.637
Action B2 "Harmonization of source apportionment and priorization of pollution sources "	518.193	110.300	407.893	501.793
Action B3 "Determination of the impact of natural sources "	149.830	38.373	111.457	116.209
Action B4 "Determination of the impact of biomass burning"	180.454	23.973	156.481	180.454
Action B5 "Determination of the impact of industrial sources"	108.218	11.327	96.891	108.218
Action B6 "Determination of the impact of traffic related sources"	154.087	17.710	136.377	164.087
Action B7 "Testing of air mitigation measures - Development of air mitigation strategies"	383.582	40.219	343.363	375.582
Action B.8 Applicability of selected measures from Northern to Southern Europe	118.378	6.095	112.283	118.378
Action C1 "Effectiveness of the project actions"	81.525	1.657	79.868	81.025
Action C2 "Assessment of the socio-economic impact of the project"	21.360	0	21.360	21.360
Action D.1 "Project website"	20.800	4.199	16.601	28.800
Action D2 "LIFE+ Information boards"	19.240	3.152	16.088	18.240
Action D3 "Networking-Open forum with key stake holders"	46.655	3.855	42.800	57.655
Action D4 "Dissemination of project results"	207.511	3.908	203.603	192.411
Action D5 "Production of Layman's Report"	24.621	0	24.621	30.621
Action E1 "Project management and audit"	72.430	17.680	54.750	92.430
Action E2 "Monitoring of the project progress"	67.312	7.045	60.267	67.312
Action E3 "networking with other projects"	47.955	3.314	44.641	45.955
Action E4 "After-LIFE+ Communication Plan"	0	0	0	0
Overheads	99.785	18.346	81.439	126.406
TOTAL	**2.368.719**	**345.574**	**2.023.145**	**2.361.357**

7 OUTPUT INDICATORS

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		
Ex ante environmental monitoring		
Ex post environmental monitoring		
Other (please specify) Authorities, stakeholders consultation	5	5.000
Total budgeted cost (€)		

OUTPUTS

Part 2 - Concrete actions

Table 2 - Main project deliverables (project implementation phase)

Deliverable	No.	Budgeted cost (€)
Prototypes		
Pilot plants		
Techniques/Methodologies developed		
Software		
Successful implementation of demonstration actions		
Monitoring techniques developed		
Monitoring performed		
Guidelines		
Manuals		
Others (please specify) Scientific reports and reviews	15	650.000
PM chemical composition databases	8	560.000
Emission profiles	2	230.000
Technical guides	4	350.000
Total budgeted cost (€)		1.790.000

Table 3 - Training activities

No. of training sessions	Total no.of persons trained	Budgeted cost (€)
3	12	10.000

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)		
Number of participants:	Local/ Regional	National	EU/ International	Local/ Regional	National	EU/ International	Local/ Regional	National	EU/ International
0-25 participants									
25-75 participants	2								1
75-100 participants									1
More than 100 participants									
Total budgeted cost (€)	15.000								

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	2
General public article in national press	5
General public article in local press	5
Specialised press article	1
Internet article	
TV news/reportage	5
Radio news/reportage	2
Film produced	
Film played on TV	
Film presented in events/festivals	
Exhibitions attended	
Information centre/Information kiosk	
Project notice boards	5
Other (please specify)Publications in journal and conferences	10
Total budgeted cost (€)	220.000

Table 6 - Publications

Type of publication	No. published	No. of copies	Languages
Layman's report	1	6.000	English, Portuguese, Spanish, Italian, Greek
Manuals			
Leaflets	1	6.000	English, Portuguese, Spanish, Italian, Greek
Brochures			
Posters			
Books			
Technical publications			
Other (please specify)			
Total budgeted cost (€)	30.000		

Table 7 - Educational activities

Establishment involved	No. of students
Primary schools	
Secondary schools	300
Higher education establishments	
Total budgeted cost (€)	2.000

8 ANNEXES

ANNEX I	Kick-off meeting
ANNEX II	Management Quality Assurance Plan
ANNEX III	Partnership Agreement
ANNEX IV	Minutes of the Meetings
ANNEX V	Source apportionment Review
ANNEX VI	Sampling sites
ANNEX VII	Emission profiles of biomass fuels Report
ANNEX VIII	Dust suppressants -CMA and Mg2Cl- Test and evaluation campaign
ANNEX IX	LIFE+ Information boards
ANNEX X	Summary of the meetings with key stake holders
ANNEX XI	Workshop "Urban Air Quality: The Challenge of Non-Exhaust Emissions from Traffic"
ANNEX XII	Presentation of AIRUSE at "Retos para la mejora de la calidad del aire" by A. Karanasiou
ANNEX XIII	Presentation of AIRUSE at National Congress for the Environment by X. Querol
ANNEX XIV	Presentation of AIRUSE at Med-Particles Workshop in Barcelona
ANNEX XV	Presentation of AIRUSE at LIFE+ Networking event in Valencia
ANNEX XVI	Press and media releases
ANNEX XVII	AIRUSE leaflet project
ANNEX XVIII	Abstracts of European Aerosol Conference 2-6 Sep. 2013 in Prague
ANNEX XIX	Summary reviews on AIRUSE progress
ANNEX XX	Internal laboratory charges justification

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