



Horizon 2020

Societal Challenge: Improving the air quality and reducing the carbon footprint of European cities



Project: 690105 – ICARUS

Full project title:

Integrated Climate forcing and Air pollution Reduction in Urban Systems

D8.5 First report on outcomes of project events targeted at the scientific community and key stakeholders

WP8 Dissemination, communication and involvement of stakeholders

Lead beneficiary: MESAEP

Date: March 2018

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Responsible Author (Partners)	MESAEP			
Responsible Author	Prof. Roxani Tzimou-Tsitouridou		Email	roxani@eng.auth.gr
	Partner	MESAEP	Phone	
Other partners (Institution)	AUTH			

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Executive summary

The aim of this report is to provide an overview of the outcomes of the ICARUS events targeted at the scientific community and key stakeholders organized in the first 18 months of the project and to set out factual information relating to the establishment of the workshops, to reflect on achievements and to conclude with recommendations arising from the interactions with the events participants.

Four main dissemination/communication events targeting at the scientific community and key stakeholders were organized in the first 18 months of the project.

The first one took place at the ICARUS project launch event where a scientific workshop was held on the 1st of June 2016 at the Research Dissemination Centre of the Aristotle University of Thessaloniki (AUTH). The ICARUS scientific workshop was part of the Green Week 2016, the biggest annual occasion to debate and discuss European environment policy.

The second one took place on 11 October 2016 in Brussels where the ICARUS project was invited to participate to the Workshop “Improving air-quality and carbon footprint in cities: Enhancing synergies among EU-funded R&I projects” which was organized by DG Research & Innovation in collaboration with the Executive Agency for Small and Medium-Sized Enterprises (EASME) as a side event of the European Week of Regions and Cities.


The third one was the “1st Stakeholder Engagement Workshop”, which took place in Athens on November 3, 2016 hosted by Europe Direct under the initiative of AUTH co-organized in cooperation with Athens Development and Destination Management Agency (ADDMA), the Resilient Office of City of Athens and WP8 leader (Eucentre).

The fourth one was a scientific Workshop organized as special scientific session by Mediterranean Scientific Association for Environmental Protection International (MESAEP) within the bi-annual Symposium held in Rome from 4 to 6 October 2017.

These main dissemination events were supported by several meetings with local stakeholders in each ICARUS city. The main impacts of the events organized allowed ICARUS to facilitate the exchange of experiences and good practices between the regional and/or local policies and programmes promoting comparability and synchronisation of procedures and a possible harmonisation of ex-ante and ex-post evaluation mechanisms. Moreover, these activities enhanced partnerships between policy makers, funding bodies, academia and promoted the development of appropriate monitoring tools for decision making.


Through the presentations and discussions of project objectives and its benefits in terms of Air Quality improvement and Carbon Footprint reduction in urban areas the Project Consortium made sure that the ICARUS objectives, method and tools were spread and understood by the stakeholders engaged.

The discussion we had during the several meetings with stakeholders reflected this collective understanding as witnessed by the very active participation of all delegates. These events were successful in raising awareness about atmospheric pollution and health effect associated as well as to illustrate the methodology developed by ICARUS to quantitatively assess in

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support of air quality and climate change governance in EU Member States towards the implementation of appropriate abatement strategies to improve the air quality and reduce the carbon footprint in European cities. A wide range of issues related to mitigation of air pollutants and greenhouse gases emission and were discussed and clarified reinforcing the energy needed to face the great challenges we will need to address in the close future.

Based on the stakeholders feedback the overall ICARUS methodological framework was refined incorporating recommendations and considerations from stakeholders experiences addressing the development and evaluation of *win-win* solutions targeting urban air quality and climate change mitigation.

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ICARUS project launch event and scientific workshop - Thessaloniki, June 2016

Workshop Agenda

- **When:** 1-2 June 2016
- **Where:** Aristotle University Research Dissemination Centre (KEDEA), Thessaloniki


June 1

- 12.30 – 14.00 Welcome lunch
- 14.00 – 14.30 Round table of participants – getting to know each other
- 14.30 – 15.00 Climate Research Policy: ‘Houston, we have a problem’ (COM)
- 15.00 – 15.30 Successful implementation of Horizon 2020 research and innovation actions (COM)
- 15.30 – 16.00 *Coffee break*
- 16.00 – 16.40 Overview of CLAir-City (Trinomics)
- 16.40 – 17.30 Introduction to ICARUS (AUTH)
- 20.00 – 22.00 Working dinner

June 2

- 9.30 – 11.00 Exploring synergies among the 2 projects
- 11.00 – 11.30 *Coffee break*

Closed session for ICARUS team only

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Workshop summary

1 June 2016

At 02:00 PM the chairman Prof. Denis Sarigiannis (Coordinator of the project) opened the meeting and welcomed the participants. The chairman asked the attending partners to briefly introduce themselves and their institution.

More details concerning the individual points listed in this document can be found in the slides of the individual presentations which are made available in the project web site.

Successful implementation of Horizon 2020 research and innovation actions - Fabio Dalan (EASME)


ICARUS is expected to come up with products that can be delivered to the market. To this aim innovation aspects play a fundamental role. It is also extremely important to engage the citizens and cities: they should be engaged from the beginning of the project.

EASME is in charge of Projects' implementation. Its role is to prepare the Grant Agreement, to monitor scientific/technical and financial issues and to support exploitation and dissemination of project results providing policy feedback.

Project implementation foresees a number of mandatory actions:

- We need to guarantee open access to research data. This has to be detailed in the Data management plan (DMP) whose first version has to be delivered at Month 6. It has to be a living document which should be updated during the project execution. (i.e. every periodic reporting period)
- Communication: we must promote the action and its results by providing targeted information to multiple audiences (scientific community, but also various stakeholders policy makers, general public). Communication has to be targeted both in the format and language. EASME can help in the dissemination through its contact with Enterprise Europe Network (EEN). We need to inform the EASME before engaging in a communication activity expected to have a major media impact (e.g. national/international events). We have to use the EU emblem in all the dissemination and communication material produced.
- Obligation to comply with ethical principles. We need to mention how we obtained the data; where they are stored; who has access to them; informed consent. Several ethics deliverables are included in the GA. EASME is willing to provide help on this issue.
- Reporting and Financial Issues. We need to keep records and supporting documents. We always need to fill timesheets (not necessary for staff working full time for the project).

Continuous reporting through the Sygma portal (where to upload deliverables and periodic reports). We have three reporting periods (M12, M30 and M48). Periodic technical and

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financial reports must be submitted by the Coordinator within 60 days after the end of each reporting period.

Overview of CLAiR-City - Hans Bolscher (Project Director of CLAiR-City)

The CLAiR-City project consortium includes 16 Partners; Trinomics is the project coordinator: 4 cities and 2 regions: Amsterdam, Bristol, Ljubljana, Sosnowiec, Intermunicipal Community of Aveiro Region, Liguria Region.

Citizen behaviour is at the heart of CLAiR-City. They will invite thousands of people to give their opinions on air pollution and carbon reduction in their city so as cities can become more pivotal in influencing European policy – get more support from the Commission in terms of policy making.

Cities and citizens are in the centre of their research objectives. To this aim they selected with different social, economic and health challenges.


- Initiating new modes of engaging citizens through innovative ways (e.g. apps, games, talk to youngsters, older people)
- Research is not driven by technology or source but by citizens' behaviour and daily activities: They will research for example how and when the car is used, not the car itself. How and why a house is heated in a certain way, not the machine

Discussion

This presentation provided several hints for further collaborations with CLAiR-City. Clearly the two projects have different approaches, nonetheless we have to reinforce collaboration and create synergies. It has been underlined that there are two overlapping cities (Bristol, Ljubljana). It necessary that we come with some alignment regarding the two common cities. To this aim Mr. Sabel and Mrs. Horvat will need to get in touch with Bristol and Ljubljana city authorities for data sharing and also to avoid duplication of work and efforts (e.g. a single campaign rather than two). CLAiR-City will expect cost benefit analysis to be at the core of the project, rather they will provide cities and citizens practical advices, not so much info on the costs involved. CLAiR-City approach will be tailor made for every city even though some of the instruments (game, app, school competitions, engaging with the elderly) will be used in all cities most probably in the same way. For CLAiR-City the number of citizens involved is the main priority. Reduction of air pollution is in the project but we they will not spend so much time measuring it. Policy packages and the examination of potential scenarios is the core of the project. CLAiR-City has policy makers on board. They will be strongly involved to follow the progress step by step.

Introduction to ICARUS - Denis Sarigiannis (ICARUS Project Coordinator)

Mr. Sarigiannis provided an overview of the main objectives of ICARUS and of the structure workflow pointing out the links and connections between the different Workpackages. We can see ICARUS as composed by four main blocks: The methodology development (WP1);

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the tool development (WP2, WP3 and Wp4): the policy analysis (WP5 and WP7) and the Innovation and dissemination (WP7 and WP8).

Overall the main objective is to quantitatively assess the impact of current and alternative national and local policies on reducing GHGs emissions and improving AQ. To this aim we need to evaluate the future public health and well-being impacts of policies and measures in European cities so as to propose measures of technological and non-technological nature to reduce both carbon footprint and air quality burden (win-win solutions). On a longer term we plan to develop visions of green cities with clean air, and maximal wellbeing and propose transition pathways for the realization of these visions in the next 50 years.

At the same time innovation and stakeholders engagement (including citizens) has to be seen as a central theme in the project. We plan to use citizens as researchers.

As cities partners we have Athens and Stuttgart and then a network of cities based on the project partners (Madrid, Basel, Pavia etc.). At some point we might need to formalize this collaboration.

2 June 2016


Exploring synergies among the two projects

Some common points between the two projects are the strong focus on citizen engagement, the common cities (Bristol and Ljubljana) for which data sharing would be of great interest and the exchange of information in/within the non-common cities.

However, potential limitations should be also considered. Among them is that we both will work with data where we'll have privacy issues. On a second note, we are looking whether we can take this further after the project. We do not want to end up with competing companies. Also, we need to align the work (especially with regard to approaching citizens) in an optimal way to have a more effective collaboration. We have to avoid to the projects end up with different policy packages suggested.

Our communication teams should be engaged in a common dialogue. The way we approach complexity is to target it at the earliest stage possible. We can summarize as follows:

- 1 We can agree that our teams in both common cities should meet asap to discuss what can be done in a city level in terms of cooperation.
 - 2 We share a list of partners in our projects. We specifically ask WP leaders to talk together and think about if there is an opportunity of data sharing or if there are condition suitable so that for example we have a common field campaign.
 - 3 Then roughly after 6 months we will have a meeting where we will identify what came out of these discussions.
 - 4 Organize common events such as workshops. The Commission could provide support for these future meetings-workshops.
 - 5 At the end of the project (April 2020) we will try to talk about policy making being on the same table.
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With regard to the cooperation with the third project (i.e. iSCAPE) the idea is to set up a teleconference. Then they can join us in the workshop in 5-6 months from now.

Outcomes from stakeholders: problem identification and tool development

In ICARUS we will base our estimations on primary pollutants (NO_x, PM_x, SO₂, NMVOC, NH₃, noise) and priority GHGs: CO₂, N₂O, CH₄, BC, NMVOC (ozone), NO_x (ozone). But when we assess future effects, other chemicals (e.g. PM chemical speciation) need to be taken into consideration.

Quality control of the data is important and we need to have the criteria to evaluate their quality. On one hand we get information from regulatory networks and on the other from field studies. We need to have the criteria to evaluate the quality. In any case it is better to balance between quality and inclusion of data.

The primary exercise is to collect data that already exist. Then we will execute AQ and GHGs field campaigns to fill in gaps that already exist.

Firstly each participant city should gather information on what kind of data is available. Then we can have a clear picture on what information or policies are missing.

The next step is the question of personal exposure assessment. Here we will combine a number of emerging techniques such as Agent Based Modelling. Moreover, we will have campaigns in cities with personal sensors. We also need to consider the possibility to use wearable sensors that measure pollutants. Ethics issue should be addressed soon so as to not delay the execution of campaigns.


We can start campaigns asap. The important thing is to spend the time needed on data fusion so that we can give citizens back the right information. We need to immediately have some teleconferences at WP level.

Policy analysis

Policies analysis will be carried out through methods and tools developed in WPs 1 to 4. All this work takes place iteratively, not just sequentially, but more as an interaction and also as a strong, continuous interaction between the WPs and the cities. The cities will give an opinion about the feasibility of the policies. Both policies that have direct and indirect effect on the pollution and GHGs levels should be considered

First of all, we need to establish interest and content in each city, this has to be done quite soon, the cities have to find the project interesting. Local city partners have to take the responsibility of their own city. Next step is to obtain the available information. Policies and measures cannot be only measures implemented by the city authority. Also policies and measures EU-wide have to be adopted as well; long-range transport should be taken into account. Once we have done all this analysis, we need to evaluate the benefits, as utility gains, and to try to optimize the benefit against the cost. There are also a lot of political considerations to be accounted. Each city will also evaluate the feasibility of the policies and measures.

Project Evaluation Plan (PEP) is the first deliverable in WP5 (M12) and the coordinator (and also the other partners) are expected to contribute - in due time - on how to proceed with

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clarifying its need, purpose, and content specification. What we need to describe in the process evaluation plan is the way to do the evaluation, not to do the evaluation. This has to be done in consultation with various stakeholders. In M12, we need to describe how we are going to do the evaluation. The actual assessment has to be performed in parallel to the work in WPs. And in M42, we need to derive an overall report on the implementation. It is a bit misleading the description of D5.1; barriers and drivers will be identified during the evaluation of the feasibility of measures and policies and will be presented in a consolidated manner after the final evaluation of the policies in M42 (D5.5). We need to look for the satisfaction of the citizens. Thus, the identification of the barriers has to be clear and very specific, since we need to provide justification why something (i.e. certain measures or a policy alternative) cannot be applied in a particular city.

In the evaluation plan different indicators should be used: some of them are pretty well-known (e.g. DALYs for human health) others will have to be better identified. For example for transportation and industry related measures we need multiple different indicators. Only emission factors will not be enough, since certain measures, e.g. new cycling lanes, new pedestrian zones, allocation of future industrial zones, etc. are specifically important in terms of measuring citizens' wider satisfaction.

We need to re-run our models, in order to capture the dynamics of the reality of the society, when changes are implemented. New dynamics are created after policies (e.g. increased construction of an area, after providing access to these areas through building a ring-road may lead to changes of spatial distribution of pollution). This interaction has to be captured quantitatively. Then this has to be translated into health effects.

The final aim is to evaluate real policies, being free to propose new policies


Synthesis (innovation, engagement and dissemination)

Some of the main innovations we see in ICARUS:

1. Cloud based solutions is missing from the market right now. This could be part of the innovation that ICARUS is bringing in.
2. Most of the tasks start with end-user requirements
3. The personalised character of the apps. Impact of individuals' actions will be analysed
4. We must tune our products according to the end users feedback.
5. Citizens motivation

On the citizens motivation: it would be better to avoid coupons or rewards. Citizens should feel integrated into the project, they should have a real role, a design role instead of just providing a service. Paying them creates already a hierarchy "we want you to do something for us". Giving citizens the status (that you're actually a member, a part of an important project) can sometimes be enough for them to feel engaged.

On another note: around creating future SMEs arising from the project: the EU strongly encourages now to go there. We think there is a number of areas where we could do something creative like apps, delivering data services to citizens. Academics are not always

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good at thinking about business but this project has already SMEs and we should listen to what they have to say/bring. To create a start-up is one of the final objective of CARUS.


We have to create awareness and interest in the citizens providing them with user centric tools. We could look into and use the Berkeley API and then develop our own tool. These tools can promote behavioural changes (e.g. wearing the Fitbit Flex people can be encouraged to keep themselves in good physical shape). The feedback (back to the user), provided by such user centric tools can serve as an incentive, as a driver that could force them changing their habits. To this end we can learn a lot from the CitiSense project.

We need to think to other market sections other than the citizens themselves. For example, a Taxi company could be an interested stakeholder.

Dissemination and communication are also playing a central role. We need a plan to engage stakeholders and this has to be tailored to each stakeholder group. To this aim we have a wide range of very innovative ways of dissemination. Among them the ICARUS Innovation Slams are important events. These have to bring together the ICARUS teams and the market. In each country we can organize these events addressing the private sector



Figure 1: The ICARUS launch event and scientific workshop photo group (June 2016)

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Workshop “Improving air-quality and carbon footprint in cities: Enhancing synergies among EU-funded R&I projects” – Brussels, October 2016

Workshop Agenda



"Improving air-quality and carbon footprint in cities: Enhancing synergies among EU- funded R&I projects"

Side event to the EWRC


11 October 2016 – Covent Garden 2
- Place Rogier, 16

1210 Saint-Josse, Brussels

Representatives from three EU funded projects (CLAiR-CITY, ICARUS, iSCAPE) met in Brussels to discuss on how to maximise the synergies among these just-started projects and relevant stakeholders from cities and regions on a topic of primary interest for the EU: Improving air-quality and carbon footprints in cities.

MORNING SESSION (Room 19-SDR2)

Presentation of the projects to the Partnership on Air Quality (PAQ) of the Urban Agenda of the EU (<http://urbanagendaforthe.eu/partnerships/air-quality/>):

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- 11h30 - Introduction about EASME,
- 11h35 - Presentation of the three projects: objectives and planned activities,
- 12h15 - Round table and Q&A,

From 13h00 to 14h00 – Networking lunch

AFTERNOON SESSION (Room 15-SDR2)

Workshop " Improving air-quality and carbon footprint in cities: Enhancing synergies among EU-funded R&I projects " http://ec.europa.eu/regional_policy/regions-and-cities/2016/side_events.cfm:

- 14h00 - Welcome by EASME,
- 14h10 - Round-table, introduction of the participants,
- 14h30 - Common areas for synergies: projects' perspective,

From 15h15 to 15h30 - Coffee break

- 15h30 - Common areas for synergies: possible initiatives,
- 16h00 - Projects' stocktaking,
- 16h10 - Projects' feedback on the PAQ initiative,

Wrap-up session (Room 19-SDR2)

- 16h30 – Joint conclusions with the PAQ and next steps.

Details on how to register:

To register send an email to EASME-H2020-CLIMATE-ACTION@ec.europa.eu with "WS air-quality and carbon footprint in cities" in the subject field.


Note that, due to limited seats, registration closes on Friday 30 September and will not be possible to register on the spot.

The three projects:

CLAiR-CITY

Stimulates the public engagement necessary to allow citizens to define a range of future scenarios for reducing emissions of their city. This will be facilitated by an innovative engagement and quantification toolkit, which will also be used for supporting and informing the development of city policy packages.

http://cordis.europa.eu/project/rcn/202636_en.html

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ICARUS

Provides an integrated approach for air pollution monitoring and assessment. The ICARUS methodology and toolkit will be applied in nine EU cities of variable size, socio-economic condition and history.

http://cordis.europa.eu/project/rcn/202640_en.html

iSCAPE

Will tackle the problem of reducing air pollution at target receptors with an innovative SME-led approach, focusing on the use of “Passive Control Systems” in urban spaces.

http://cordis.europa.eu/project/rcn/202639_en.html

Workshop summary

The ICARUS project was invited to be widely presented at the Workshop: “*Improving air-quality and carbon footprint in cities: Enhancing synergies among EU-funded R&I projects*” co-organized by DG RTD in collaboration with Executive Agency for Small and Medium-Sized Enterprises (EASME), on 11 October 2016 in Brussels, as a side event of the European Week of Regions and Cities (10-13 October 2016). The European Week of Regions and Cities mainly focused on the urban dimension of promoting a European Networking Platform for experts in regional and local development. Some of the basic many topics discussed during the event, were the exchange of good practices in economic development and social inclusion, cross-border cooperation, public-private partnerships, regional innovation and community-led local development. The Workshop aimed to enhance cooperation among the three sister projects (ICARUS, CLAiR-CITY, iSCAPE), co-funded by ‘Horizon 2020’ and to create synergies and links with other relevant initiatives such as the Partnership on Air Quality (PAQ) of the Urban Agenda of the EU.


At the event participated approximately 50 stakeholders from several Member States, City Authorities, representatives participating at the Covenant of Mayors and from various General Directorates of the European Commission (DG REGIO, DG ENV, DG JRC, DG GROWTH).

The ICARUS team was represented by the following participants:

- Dr. Alberto Gotti -AUTH (representing the ICARUS Project Coordination)
- Prof. Luigi Manzo - EUC (scientific contact of the City of Milan/Pavia)
- Dr Thomas Maggos - NCSR (scientific contact of the City of Athens)
- Prof. Rainer Friedrich - USTUTT (scientific contact of the City of Stuttgart)
- Dr. Theodoros Nikolakopoulos - UPCOM (industrial partner - SME from Belgium)

During the morning session, Dr. Gotti (AUTH) on behalf of the ICARUS team, presented the ICARUS project, illustrating its main objective, the methodological framework and tools to be applied in order to identify and assess appropriate abatement strategies for improving the air quality and reducing the carbon footprint in nine (9) European Cities.

In the afternoon round table sessions, the three sister projects were extensively discussed and views were exchanged in order to enhance synergies and maximise the support from EASME.

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From the discussion emerged that reducing the carbon footprint and air quality in cities and urban areas is an extremely relevant hot topic between the projects and potential major synergies and mutual benefits were identified among the PAQ and the projects. The projects are co-creating knowledge with a number of local stakeholders and are developing specific tools to tackle carbon footprint and air pollution. Therefore, enormous potential exists in replicating and adopting innovative tools in cities and local authorities participating in the PAQ. This will eventually maximize the impact of all 3 projects, while at the same time will give concrete assistance to the PAQ, supporting and enhancing its work. Moreover, mutual interest was expressed in keeping ‘alive’ the exchange of knowledge and the interaction between the PAQ and the Projects. To this aim, a future common event will be organized, as a follow up.

Although it appears too early for the identification of specific activities among projects, it is worth underlining that possible synergies among are feasible in terms of exploitation of results. In particular, exchange of information could be seen as a good start for creating complementary products that might reciprocal reinforce each project, rather than compete them. In this perspective, a specific service of the European Commission called Common Exploitation Booster is available, through dissemination and exploitation, for supporting these projects (<http://exploitation.meta-group.com/SitePages/default.aspx>).

The closing discussion offered the opportunity for delegates to address further questions and discuss projects’ future plans. In general, all participants agreed that the meeting was a successful milestone in the ICARUS journey and the delegates left reinvigorated to meet the upcoming challenges.

Participant stakeholders emphasized there is a mutual interest in keeping alive the exchange of knowledge and the interaction between the PAQ and the ICARUS Projects. A common event could be foreseen in the future as a follow up.



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Figure 2: Workshop “Improving air-quality and carbon footprint in cities: Enhancing synergies among EU-funded R&I projects” (October 2016).

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1st Stakeholder Engagement Workshop –Athens, November 2016

Workshop Agenda

ICARUS
Stakeholder Engagement Event
Athens / Greece
November 3, 2016

Hosted by
Athens Development and Destination Management Agency (A.D.D.M.A.)

Venue:
Europe Direct, 50, Akadimias Str., 106 59, Athens, Greece
<http://europedirect-cityofathens.gr/>

AGENDA

09.00 – 09.30 Registration

Chair: Evelin Matiaki, European Project Manager EnvE Lab, AUTH

09.30 – 10.30 Overview of ICARUS Project Methodological Framework and Stakeholders Engagement – Prof. Dimosthenis Sarigiannis (ICARUS Principal Investigator, AUTH)

10.30 – 11.30 Open Discussion & Introduction of Stakeholders - Alberto Gotti (ICARUS Project Manager)


11.30 – 12.00 Coffee Break

Chair: Prof. Eleni Myrivili, Chief Resilience Officer, City of Athens Council Member (Urban Sustainability)

12.00 – 12.30 Integration of ICARUS Methodology into Local / Regional / National Action Plans & Policy Framework – the connection with the Resilient Cities concept - Prof. Eleni Myrivili, Chief Resilience Officer, City of Athens Council Member (Urban Sustainability) and Kostas Georgiou, Project Manager at ResilientAthens

12.30 – 13.00 Benefits of Stakeholder Engagement towards Smart, Green & Healthy Cities – Prof. Dimosthenis Sarigiannis and Prof. Rainer Friedrich (U. Stuttgart)

13.00 - 14.00 Closure and Lunch

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Announcement







INTEGRATED CLIMATE FORCING AND AIR POLLUTION REDUCTION IN URBAN SYSTEMS



ICARUS

Stakeholder Engagement Event

3 November 2016, Athens, Greece

Co-organized by
the Environmental Engineering Laboratory of the Aristotle University of Thessaloniki (EnvE-Lab AUTH)
& the Athens Development and Destination Management Agency (A.D.D.M.A.)



www.icarus2020.eu


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Supported by





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Workshop summary

The 1st Stakeholder Engagement Workshop was held in Athens hosted by Europe Direct under the initiative of AUTH co-organized in cooperation with Athens Development and Destination Management Agency (ADDMA), Eucentre (WP8 – Dissemination leader) and the Resilient Office of City of Athens, focusing on the promotion of participatory development of project's methodological advances and community based research. A total of 124 stakeholders were identified, personally contacted and invited to the event. Forty-nine national/regional/local stakeholders, policy makers & regulatory bodies, representatives from engineering & medical sector, industry & SMEs, academic and scientific community, NGOs, international organizations attended the workshop, while a wide dissemination approach was adopted by inviting an extensive list of local media and the press.

ADDMA officially sent invitations to all identified stakeholders. Media and the press were also invited to the event for wide publication and dissemination coverage. A wide dissemination approach was adopted by inviting an extensive list of local media and the press. During the workshop the ICARUS methodology was discussed and the several conceptual steps encompassing the framework were illustrated and discussed with the audience. During and after the stakeholder engagement meetings we have obtained feedback regarding the applicability and relevance of the exposed ICARUS approach in local urban realities. In particular in Athens the urban resilience plan was worked upon prior to the completion of the methodological approach of project task 1.2. This case was used as a flagship case for the project since Athens is one of the 100 resilient cities global network and the developments with regard to resilience would reflect options that would be applicable in other urban realities across the EU as well.

Based on the stakeholders feedback the ICARUS methodology was updated to reflect the difficulties and explore the resilience solutions described in the Athens resilience plan by way of example for incorporating urban resilience considerations when addressing the development and evaluation of *win-win* solutions targeting urban air quality and climate change mitigation.



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Figure 3: The ICARUS 1st Stakeholder Engagement Workshop (November 2016)

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MESAEP Symposium – Rome, October 2017

ICARUS Workshop announcement and scientific program

The Mediterranean Scientific Association for Environmental Protection International (MESAEP) is the oldest Scientific Association working in the area of Environmental Protection in the Mediterranean basin organizing since the late 70s bi-annual symposia dedicated to scientists working in the area of environmental protection to come together and discuss the novel trends in environmental topics and that consistently delivers a cutting-edge agenda and 200+ senior delegates.

The 19th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region with focus on “Environmental and health inequity; science in the service of society” was organized by MESAEP from October 3 to October 6 2017 at the CNR Headquarters in Rome, Italy.

The MEASEP conference was an ideal opportunity for the ICARUS consortium to show to an audience of around 300 delegates from 23 different countries (Figure 4) the ICARUS project methods, tools and results. The audience encompassed a wide range of stakeholders including key representatives of the Italian Public Health Service (ISS), the Italian National Research Council (CNR) as well as well-known scientists from several European Universities and Research Centres specialized on the different facets of air quality and climate change assessment and management.

The ICARUS special session took place on October 5th, 2017.

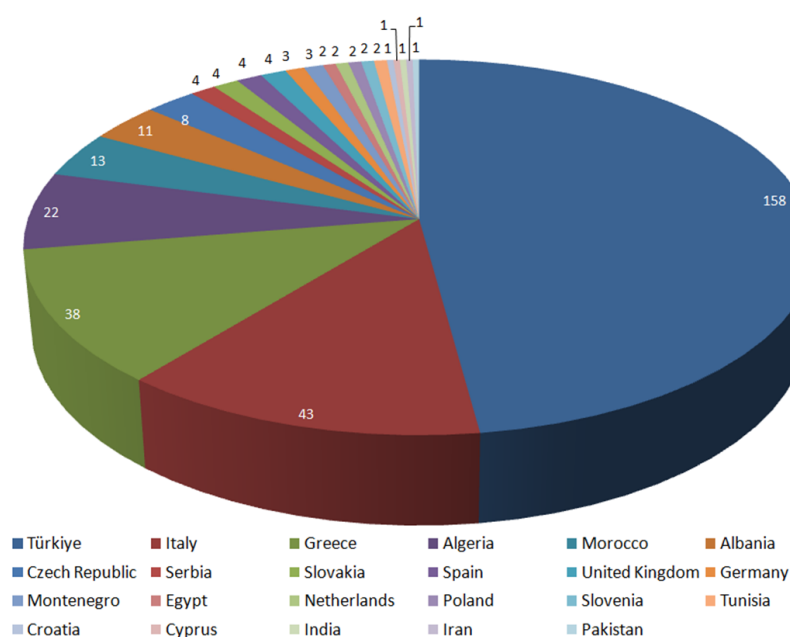



Figure 4: geographical distribution of MESEAP delegates

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19th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region October 4-6, 2017 Rome - Italy



with focus on
**Environmental and health inequity; science in
the service of society**

Organized by




MESAEP

Mediterranean Scientific Association
of Environmental Protection

in collaboration with


Consiglio Nazionale delle Ricerche, Roma, Italy; Institute of Advanced Study in Pavia, Italy; Aristotle University of Thessaloniki, Greece; Politecnico di Torino, Italy; Akdeniz University and Technical University of Istanbul, Turkey; Helmholtz Zentrum München, Germany; Public Health England, United Kingdom; Istituto Superiore di Sanità, Italy; Università di Roma la Sapienza, Italy; the ICARUS consortium.

Figure 5: MESAEP 2017 Symposium announcement

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<h2>Program at a glance</h2>			
October 4	October 5	October 6	
Symposium opening			
Morning sessions	Morning sessions	Morning sessions	
Environmental and health inequities	ICARUS special session: Climate change mitigation - towards win-win solutions	Natural and man-made disasters	
Environmental health and well-being	Ecotoxicity and biodiversity	Environmental economics, policy, education	
Afternoon sessions	Afternoon sessions	Afternoon sessions	
Sustainable natural resource and waste management	Water and soil pollution	New and emerging technologies	
Indoor and outdoor air pollution	Energy, environment and sustainability		
Rapid Fire presentations	Rapid Fire presentations		
	Panel discussion		
Welcome cocktail	Official Gala Dinner	Closing ceremony	
MESAEP Gen. Assembly			

Figure 6: MESAEP 2017 Symposium Scientific - Program at a glance

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		Page 14	Oral presentations	
		Keynote lecture – Sala Convegni	9:00-	
		Simone Cresti – PRIMA Foundation	9:45	
		COFFEE BREAK	9:45-	
			10:15	
ICARUS special session: Climate change mitigation and air pollution abatement – towards win-win solutions				
Morning session – October 5th Oral presentations – Sala Convegni				
Chair: Rainer Friedrich – Enrico Scoccimarro				
Abstract	Title	Authors	Presenter	Time
373	An integrated approach to combat atmospheric pollution in smart cities through policy interventions and behavioural change – The ICARUS paradigm	Dimosthenis Sarigiannis	Dimosthenis Sarigiannis	10:15
103	Possible ways of mitigating the effects of climate change using efficient urban planning and landscape design principles in Turkey	Süleyman Toy, Neslihan Demircan, Metin Demir	Süleyman Toy	10:30
248	Conflicts between climate change mitigation and air pollution abatement	Rainer Friedrich	Rainer Friedrich	10:45
118	Characteristics of air pollution in the city of Erzurum	Metin Demir	Metin Demir	11:00
129	“The Evaluation Of The Urban Agriculture As Urban Ecosystem Services About The Mitigating Effects At Climate Changes”	Neslihan Demircan	Neslihan Demircan	11:15
137	A study of determining environmental quality in lake Urmia in north–western Iran	Naiyer Gheshlagh Sofla, Hasan Yilmaz	Hasan Yilmaz	11:30
228	Enlarging road surfaces and urban climatic conditions in the sample of a middle– sized Turkish city, Erzurum, Turkey	Muhammed Yasin Çodur, Süleyman Toy, Ahmet Ünal	Muhammed Yasin Çodur	11:45
254	Dynamic Monitoring of Land Cover Change: A Recent Study for Istanbul Metropolitan Area	Wasim Shoman, Merve Korkutan, Uğur Algancı, Hande Demirel	Wasim Shoman	12:00
356	Extreme events of perceived temperature over Europe: a projected northward extension of dangerous area	Enrico Scoccimarro, Pier Giuseppe Fogli, Silvio Gualdi	Enrico Scoccimarro	12:15
384	A meteorological monitoring network to investigate climate change in towns: six Mediterranean urban case studies	Cristina Lavecchia, Samantha Pilati, Pamela Turchiarulo, Cinzia Ferrari, Luca Avellis, Laura Mancini	Cristina Lavecchia	12:30
289	Investigation of the Effect of Traffic on Environmental Pollution	Muhammed Yasin Çodur, Ahmet Ünal	Muhammed Yasin Çodur	12:45
LUNCH BREAK				13:00-14:30

Figure 7: ICARUS special session scientific program at the MESAEP 2017 Symposium

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Workshop summary

The workshop was introduced by a keynote lecture given by Dr. Simone Cresti project officer at the University of Siena who provided an overview of the Partnership on Research and Innovation in the Mediterranean Area (PRIMA) foundation initiative. With a budget of 500 million euro for the next 10 years, the PRIMA initiative represents an important tool for the promotion of dialogue and cooperation between Euro-Mediterranean countries and for their sustainable and long-lasting development. PRIMA aims at developing innovative solutions and promote their adoption for improving the efficiency and sustainability of food productions and water provision, in order to support an inclusive well-being and socio-economic development in the Mediterranean Area, within the framework of a reinforced Euro-Mediterranean co-operation.

To achieve such goal, the PRIMA Initiative will be driven by two intentions:

- to advance existing knowledge and innovations for water management, food security, and food quality through long-term cooperation
- to ensure the adoption of knowledge and unlock its innovation potential through end user-friendly and societally affordable solutions

In order to achieve not only scientific but also socio-economic impacts, PRIMA intends to support the whole innovation chain to ensure that research results are translated into an economic environmental sustainable development matching the ICARUS objectives.

The quality of the presentations was high and several colleagues expressed their interest in publishing their work presented in the symposium into this Special session. After a thorough peer review process, where each manuscript was evaluated by two independent reviewers, 11 high quality manuscripts were finally selected for publication. Three out of the eleven presentations were provided by the ICARUS consortium (Prof. D. Sarigiannis, Prof. R. Friedrich and Dr. E. Scoccimarro) who provided an overview of the ICARUS project, the methods and tools developed together with some preliminary results obtained. The remaining eight presentations focused on other current initiatives and research projects in the Mediterranean countries in the field of climate change and air quality.

This event contributed to greatly enhance the ICARUS visibility and to lay the groundwork for a closer cooperation in air quality and climate change management and to institute a dialogue in the scientific community and gave us the opportunity to establish strategic connections with other European initiative such as PRIMA foundation and to learn from other research groups what is the state of the art in this research field in the Mediterranean area.


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Figure 8: ICARUS special session at the MESAEP 2017 Symposium (October 2017)



Figure 9: ICARUS special session at the MESAEP 2017 Symposium (October 2017)



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Figure 10: ICARUS special session at the MESAEP 2017 Symposium – discussion among delegates during a break (October 1017).


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Summary of the main meetings organized with stakeholders


In addition to the four main events previously reported several meetings with local stakeholders in each ICARUS city took place. Table 1 summarizes the most important meetings organized with local stakeholders in the first 18 months of the project.

Table 1: Summary of the main meetings organized with stakeholders in the first 18 months of the project


Meetings organized with stakeholders	Name	Organizer	ICARUS participants (name / partners)	Date / Place	Notes/ comments
Meeting with the ICARUS coordinator and the representative of Piraeus municipality	Municipality of Piraeus, Executive City Councillor's Office for Local Economic Growth & Entrepreneurship	AUTH	Dimosthenis Sarigiannis / AUTH	27.11.2016	Discussions about the development and implementation of 'smart' solutions in urban (smart city, smart energy, eco-city) and social functions
Bi-lateral meeting between Swiss TPH and key Basel city stakeholders	Lufthygieneamt beider Basel, Amt für Umwelt Basel-Stadt	Swiss TPH	Swiss TPH	24.1.2017 Swiss TPH, Basel	Minutes were shared with ICARUS PI
	Madrid City (Head and technical personnel of the Air quality network and Environmental Health)	ISCIII	Saul García Dos Santos-Alves Pilar Morillo Gómez Elena Boldo Pascua Rebeca Ramis	19.5.2017 Subdirección General de Sostenibilidad (Ayuntamiento de Madrid)	The First official meeting with the authorities of Madrid They were enthusiastic about the objectives of

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	Departments		Prieto Rosalia Franco Peteira		the ICARUS project and they believed that it will have a big impact to the Madrid city policies
	Technical Meeting on Task 7.1: Development of the ICARUS Decision Support System	UPCOM		6.12.2016 Brussels, Belgium	
Deputy mayor	Martin Ander	MU	Degrendele/ Mikeš	20.6.2016 Brno	Intro, delegation of the people responsible for specific areas of expertise
Department of the Environment	Martin Vaněček and colleagues	MU	Sharma/ Mikeš	11.7.2016	Introduction to the project, sharing data
Air quality meeting	Brno, Department of the Environment	Brno	Sharma/ Mikeš	25.7.2016	Air quality plan
Department of Transport Concept	Zdeňka Šamánková	MU	Degrendele/ Mikeš	19.9.2016	Traffic data and city plans
BKOM (City company for traffic planning)	Bedán, Švanda	MU	Sharma/ Mikeš	21.9.2016	traffic system and data
Dispersion study at	Jakub Bucek	MU	Degrendele/	26.9.2016	GIS maps

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RECETOX			Mikeš		
Deputy major and Department of the Traffic	Martin Ander, Aleš Keller	Brno	Degrendele/ Mikeš	31.8.2016	data suggestions
BKOM (City company for traffic planning)	Bedáň, Švanda	MU	Sharma/ Mikeš	22.3.2017	traffic planning system
Mobility plan	Brno representatives	Brno	Degrendele/ Mikeš	22.3.2017	traffic planning
Visions 2050, Deputy mayor	Jaroslav Kacer and participants	Brno	Degrendele/ Mikeš	22.3.2017	Smart cities 2050
Visions 2050, Deputy mayor, workshop	Jaroslav Kacer and participants	Brno	Mikeš	10.5.2017	Smart cities 2050
1 st Stakeholder Engagement Event, Athens, Greece	Evelyn Matiaki, Stefanos Kokkorikos, Mary Saradari, Angela Gaitani	EnvE- Lab AUTH, ADDMA ADDMA ADDMA	All	3.11.2016	
Meeting with Milan Municipality	Dr. Piero Pellizzaro Municipality of Milan Department for Economic Innovation, Smart City	EUCENTRE in collaboration with Municipality of Milan Department for Economic Innovation, Smart City	Alberto Gotti (AUTH), Fabio Germagnoli (EUC), Luig Manzo (EUC)	29.11.2016	

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	and University for the H2020 project Sharing Cities.	and University for the H2020 project Sharing Cities.			
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