

Horizon 2020

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



Project: 690105 – ICARUS

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Integrated Climate forcing and Air pollution Reduction in Urban Systems

D8.8: First report on outcomes of stakeholder interactions

WP8 Dissemination, communication and involvement of stakeholders

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1 Executive summary

The ICARUS team has had an extensive series of interactions with different types of local stakeholders in the nine cities participating as application sites of the ICARUS methodology. Forty-six meetings have been held with these stakeholders during the first 30 months of the project in order to ensure that the civic society and local institutional stakeholders would be aware of the ICARUS approach and implementation in their city and that they could both benefit from the ICARUS findings and provide input to the research agenda formation in each participating city. The local and regional authorities could benefit from ICARUS outcomes through the following:

- Provision of technical support to the cities in data collection, monitoring and analysis.
- Opening up of funding opportunities in the future.
- Promotion of citizen awareness of the adverse effects of air pollution and climate change locally and dissemination of best practices towards the effective curbing of air pollutants and greenhouse gases.

The main outcomes from the close and constant interactions with local/regional stakeholders are summarized below:

- ICARUS can provide additional air quality data that are not available at the local level to all relevant stakeholders and institutional authorities
- Information on source apportionment is crucial, because the identification of major sources will result in the most efficient interventions for combating air pollution
- ICARUS provides the tools to quantify the benefits of envisaged policies and measures
- The ICARUS DSS is of particular interest for the various stakeholders that are interested in the comparative assessment of the envisaged measures
- The detailed spatial resolution analysis provided by ICARUS provides detailed information of the hot-spots and areas of the urban canopy where interventions are needed the most
- A lot of discussions with stakeholders were related to the available policies and measures that are already foreseen or under discussion for implementation. The methodological tools provided by ICARUS offer unique opportunities for evaluating the available options, as well as for optimizing their implementation. In Thessaloniki, the study carried out by the AUTH team resulted in the optimization of the Metro lines, so as to reduce traffic burden from specific areas and to increase the benefits of reduced air pollution.
- In addition, the technological capacity provided by ICARUS in the city of Athens (ADDMA is a partners of ICARUS) offered the innovation potential for selecting Athens as the City that is the capital of innovation for the year 2018, as well as its election as chair of the global network of Resilient Cities taking the helm after Washington DC (USA).

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2 Events related to stakeholder interaction and related outcomes

The ICARUS team has held numerous meetings since the beginning of the project and it is in continuous interaction with stakeholders in all the cities participating in the project. In what follows, a comprehensive list of meetings and interactions with key stakeholders with particular emphasis on policy makers at the local/regional level and, to the extent possible, the European level is given. Next to each meeting description the main content of the meeting and the principal participants are described for greater transparency.

2.1 Meeting with Brno Deputy mayor

The meeting took place in Brno, with the Brno Deputy Mayor on 20-06-2016. Partners from Masaryk University participated in the meeting while it was organized by Martin Ander.

2.2 Meeting with Brno Department of Environment

The meeting with Brno Department of Environment was held on the 11th of July 2016 in Brno, in which partners from Masaryk University took part. It was organized by Martin Vaněček and his colleagues.

2.3 Air quality meeting

The Air Quality meeting was held in Brno on the 25th of July 2016 between the partners from Masaryk University and representatives from the Department of the Environment. The latter were also responsible for the organization of the meeting.

2.4 Meeting with Brno Deputy major and Department of the Traffic

The meeting among the partners from Masaryk University, Brno Deputy major and the Department of the traffic was organized by Martin Ander and Aleš Keller in Brno on 31-08-2016.

2.5 Meeting with Brno Department of Transport Concept

The meeting between the partners from Masaryk University and the Department of Transport Concept was held in Brno on 19th of September 2016 and was organized by Zdeňka Šamánková.

2.6 Meeting with Brno BKOM (City company for traffic planning)

The meeting of partners from Masaryk University with Brno BKOM, a city company for traffic planning, was carried out in Brno on 21-09-2016 and was organized by Bedáň Švanda.

2.7 Dispersion study at RECETOX

A dispersion study at the Research Centre for Toxic Compounds in the Environment (RECETOX) was conducted by Masaryk University and organized by Jakub Bucek.

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

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 took place on the 11th

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of October 2016 in Brussels. The event was organized by the 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. Representatives of AUTH (Alberto Gotti), USTUTT (Rainer Friedrich), EUC (Luigi Manzo) and UPCOM (Theodore Nikolakopoulos) participated in the workshop.

2.9 1st Stakeholder Engagement Event, Athens, Greece

The 1st Stakeholder Engagement Event organized by Aristotle University of Thessaloniki and Athens Development and Destination Management Agency (ADDMA) was held in Athens on the 3rd of November 2016 and all the partners attended.

2.10 Meeting with the ICARUS coordinator and the representative of Piraeus municipality

The meeting among the ICARUS coordinator, the representative of Piraeus municipality and the partners from AUTH took place on the 27th of November 2016 in Athens. The organization committee was the municipality of Piraeus and the Executive City Councillor's Office for Local Economic Growth & Entrepreneurship.

2.11 Meeting with Milan Municipality

The meeting organized by the EUCENTRE in collaboration with the Municipality of Milan, the Department for Economic Innovation, Smart City and University for the H2020 project Sharing Cities took place in Milan on the 29th of November 2016. The representatives of AUTH (Alberto Gotti) and EUC (Fabio Germagnoli and Luigi Manzo) attended the meeting.

2.12 Technical Meeting on Task 7.1: Development of the ICARUS Decision Support System

UPCOM organized the technical meeting on Task 7.1 regarding the development of the ICARUS Decision Support System, which was held in Brussels on the 6th of December 2016.

2.13 Bi-lateral meeting between Swiss TPH and key Basel city stakeholders

The bi-lateral meeting between Swiss TPH and key Basel city stakeholders, organized by the Lufthygieneamt beider Basel, Amt für Umwelt Basel-Stadt, took place in Basel on 24-01-2017.

2.14 Meeting with Brno BKOM (City company for traffic planning)

The meeting between the partners from Masaryk University and Brno BKOM was organized by Bedáň Švanda in Brno on the 22nd of March 2017.

2.15 Meeting with city of Brno for Mobility plan

On the 22nd of March 2017, the meeting between the partners from Masaryk University and the representatives of city of Brno for mobility plan took place.

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2.16 Meeting with Brno Deputy mayor for city Visions for 2050

The meeting with Brno Deputy mayor for city visions for 2050 was organized by Jaroslav Kacer and participants on the 22nd of March 2017 in Brno.

2.17 Workshop with Deputy mayor for city Visions for 2050

The workshop with Deputy for city visions for 2050 was organized by Jaroslav Kacer and participants on the 10th of May 2017 in Brno.

2.18 Meeting with Subdirección General de Sostenibilidad (Ayuntamiento de Madrid)

ISCIII representatives (Saul García Dos Santos-Alves, Pilar Morillo Gómez, Elena Boldo Pascua, Rebeca Ramis Prieto, Rosalía Franco Peteira) attended the meeting with Subdirección General de Sostenibilidad (Ayuntamiento de Madrid), organized by the Head and technical personnel of the Air quality network and Environmental Health Departments of Madrid city on the 19th of May 2017 in Madrid.

2.19 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting between USTUTT representatives (Rainer Friedrich, Julia Neuhäuser, Ulrich Voigt, Manfred Wacker, Emely Richter) and members of the Department for Environmental Protection of City of Stuttgart regarding the data collection for Stuttgart Emission Database was held on 19-07-2017 in Stuttgart.

2.20 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting with the same subject was repeated on the 30th of August 2017 in Stuttgart.

2.21 Finalization of the Cooperation Agreement with Milan Municipality

The meeting regarding the finalization of the cooperation agreement with Milan Municipality and the data collection for Stuttgart Emission database was organized by EUCENTRE, Milan municipality and Sharing Cities project on the 25th of September 2017 in Milan. EUCENTRE representatives (Alberto Gotti, Fabio Germagnoli, Luigi Manzo) attended the meeting.

2.22 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting with members of City of Stuttgart, Department for Environmental Protection, and USTUTT representatives (Rainer Friedrich, Julia Neuhäuser, Ulrich Voigt, Manfred Wacker, Emely Richter) was held on 13-10-2017 in Stuttgart regarding data collection for Stuttgart Emission Database.

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2.23 Emission Inventory: present and future for the city of Milan

The emission inventory -present and future for the city of Milan- was organized by the EUCENTRE representative, Alberto Gotti, the Municipality of Milan in the framework of the Sharing Cities project on 27-11-2017 in Milan. The objective was the discussion and collection of information on urban policies and measures.

2.24 Formal request for data on air quality and climate change, in Madrid city

The meeting regarding the formal request for data on air quality and climate change in Madrid city was organized by ISCIII on the 15th of December 2017 in Madrid. The attendees were S. Garcia, Elena Isabel Boldo Pascua and Rosalia Franco Peteira and the objective of the discussion was the request of access to the emission inventories developed by the Madrid City Council.

2.25 Meeting regarding the existing plans for Ljubljana

The meeting regarding the existing plans for Ljubljana was organized by the Municipality of Ljubljana on the 23rd of January 2018. Davor Kontić, representative of Josef Stefan Institut (JSI), participated in the meeting.

2.26 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting between members of the Department for Environmental Protection of City of Stuttgart and USTUTT representatives (Rainer Friedrich, Julia Neuhäuser, Ulrich Voigt, Manfred Wacker, Emely Richter) was held on the 6th of February 2018 in Stuttgart. The objective of the meeting was the discussion and information collection on city measures and long-term vision.

2.27 Meeting about long-term plans for Ljubljana

The meeting about long-term plans for Ljubljana between the Municipality of Ljubljana and the JSI representative, Davor Kontić, took place on the 3rd of April 2018 in Ljubljana.

2.28 Bicycle on the go: Towards a green future

The meeting in the framework of “Bicycle on the go: towards a green future” according air quality and health related issues was organized by the Municipality of Ljubljana on the 19th of April 2018 in Ljubljana. JSI representatives (Davor Kontić, Tjaša Kanduč, David Kocman) attended the meeting.

2.29 City ecosystem meeting

The City Ecosystem meeting, organized by Masaryk University and the City of Brno, was regarding visions 2050 strategy planning and was held on the 23rd of April 2018 in Brno.

2.30 Smart City Brno conference

Representatives of Masaryk University (Ondrej Mikes, Lucie Grohmanova) attended the Smart City Brno conference, which was organized by Masaryk University and City of Brno and was held from the 25th to 27th of April 2018.

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2.31 Senior point

Representatives of Masaryk University (Ondrej Mikes, Lucie Grohmanova) presented the ICARUS project at the Senior Point meeting organized by Masaryk University on the 16th of May 2018 in Brno.

2.32 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting with members of the Department for Environmental Protection of City of Stuttgart and USTUTT representatives (Rainer Friedrich, Julia Neuhäuser, Ulrich Voigt, Manfred Wacker, Emely Richter) regarding information collection on city measures and long-term vision took place on the 5th of June 2018 in Stuttgart.

2.33 Elaboration and selection of future “visions” of Madrid city

The elaboration and selection of future “visions” of Madrid city was organized by ISCIII on the 12th of June 2018 in Madrid. S. Garcia, Elena Isabel Boldo Pascua attended the meeting.

2.34 Emission Inventory: present and future for the city of Milan

The emission inventory -present and future for the city of Milan- was organized by EUCENTRE and the Municipality of Milan in the framework of the Sharing Cities project on the 3rd of July 2018 in Milan. EUCENTRE representatives (Alberto Gotti, Alberto Gotti, Enrico Ponte, Marco G. Persico) attended the meeting, the objective of which was the collection of information on urban policies and measures and the discussion about the sensor campaign in Milan.

2.35 Health impact of AQ and CG policies

The health impact of AQ and CG policies meeting was organized by Masaryk University, the Department of Health and the City of Brno on the 14th of August 2018 in Brno. Ondrej Mikes and Lucie Grohmanova attended the meeting, which was about relevant health outcomes and ICARUS project.

2.36 Meeting to discuss about available data for vehicle fleet composition

The meeting regarding the available data for vehicle fleet composition was held by Masaryk University and the transportation company, BKOM City on the 10th of September 2018 in Brno.

2.37 Meeting about foresight for Ljubljana

JSI representative, Davor Kontic, attended the meeting about foresight for Ljubljana, which was organized by JSI on the 14th of September 2018 in Ljubljana.

2.38 Expert and stakeholder workshops on city vision for 2050

ISCIII organized the expert and stakeholder workshops on city vision for 2050, which were held during 20-21 September 2018. All the partners attended the workshops.

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2.39 Conference #brno2050

The conference #brno2050 was held on the 17th of October 2018 and was organized by the City of Brno. Ondrej Mikes took part in the conference, the objective of which was visions 2050 strategy planning.

2.40 Lufthygieneamt beider Basel, Amt für Umwelt Basel-Stadt (Informal communication with key Basel city stakeholders)

The informal communication with key Basel city stakeholders was organized by Swiss TPH and was held on the 18th of October 2018 in Basel regarding stakeholders/data providers on emission modelling for Basel (WP2). Benjamin Flueckiger and Danielle Vienneau took part in the communication.

2.41 Milan 2020-2030: policies and their effects on Air Quality

The objective of “Milan 2020-2030: policies and their effects on Air Quality” meeting, held on the 23rd of October 2018 in Milan and organized by EUCENTRE and the Municipality of Milan in the framework of Sharing Cities project, was the sensor campaign in Milan.

2.42 Traffic and air quality in Brno

The round table discussion “Traffic and air quality in Brno” about the possibilities of improvement of the air quality in Brno was organized by the City of Brno on the 26th of October 2018 in Brno.

2.43 Meeting with the General Director for Sustainable Development and Climate Change of the Region of Attica

The meeting with the General Director for Sustainable Development and Climate Change of the Region of Attica regarding the air quality and health related issues near Piraeus port was organized by National Centre for Scientific Research “Demokritos” (NCSR) on the 29th of October 2018 in Athens.

2.44 Milan 2020-2030: policies and their effects on Air Quality

“Milan 2020-2030: policies and their effects on Air Quality” meeting was held on the 9th of November 2018 in Milan and was organized by AUTH, EUCENTRE and the Municipality of Milan in the framework of Sharing Cities project. ICARUS coordinator, Denis Sarigiannis, and EUCENTRE representatives, Alberto Gotti, Enrico Ponte, Marco G. Persico, took part in the meeting and discussed about the sensor campaign in Milan.

2.45 Meeting with members of City of Stuttgart, Department for Environmental Protection

The meeting with members of the Department for Environmental Protection of City of Stuttgart and USTUTT representatives, Rainer Friedrich, Julia Neuhäuser, Ulrich Voigt, Manfred Wacker, Emely Richter, took place on the 28th of August 2018 in Stuttgart. The objective of the meeting, organized by USTUTT and the Department for Environmental Protection of City of Stuttgart, was the information collection on city measures and long-term vision.

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2.46 Informal communication with Athens city stakeholders and city advisors

An informal communication channel with Athens city stakeholders and city advisors and ADDMA and the Office of Resilience and Sustainability (ORS) was organized by ADDMA, WWF, Greenpeace and Advisor on Cycling in the cities in Athens to update stakeholders on WP6 visions and on the sensor campaign in Athens. This is constantly open and allows the project team to interact continuously with Athens stakeholders both on an operational (e.g. sensor campaign) and on a strategic (assessment of long-terms urban development visions) level to ensure the resilient evolution of the city of Athens towards smart, green and healthy urban metropolis in the Mediterranean.

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3 Discussion on the outcomes with stakeholders

Cities both affect impact climate change as well as being affected by climate change. Cities in order to address climate change related challenges should work on developing long-term visions, securing necessary resources - for the near and distant future - as well as achieving citizens and stakeholders' engagement. This requires, first, that cities have defined the short-term objectives that will contribute to achieve the longer-term vision and they should explore pathways on implementing this vision.

ICARUS helps cities to develop a roadmap to achieve the goals in their long-term visions. Moreover, ICARUS strives to provide cities with tailor-made and holistic tools for urban impact assessment that will allow the local authorities to determine the most sustainable GHG mitigation and air quality (AQ) abatement strategies and will be used in policy-making for air pollution and climate control.

The local and regional authorities could benefit from ICARUS outcomes through the following:

- ICARUS provides essential technical support to the cities in data collection, monitoring and analysis. Through close and fruitful collaboration with the consortium experts and academic partners, participating cities have the opportunity to develop air quality monitoring maps and emission/activity inventory databases. This is a crucial step in understanding and identifying particular stresses, helping the cities to focus on specific measures and develop abatement strategies that enhance urban resilience and support sustainable development. By fostering data driven policy making and accountability, cities can achieve effective and efficient governance and manage to communicate and collaborate better with their residents, visitors and investors.
- Provide future funding opportunities. Cities could build on their strategies and action plans to explore the best possible combination of monetary policy instruments and receive private funding to achieve the short, medium and long-term visions and goals that they have set.
- Promote citizen awareness and dissemination. Through strategic planning and communication, cities could create a trustworthy and safe environment for their citizens. Cities should become more open and transparent through opening channels of communication, their data as well as their internal procedures. Cities should communicate more effectively their goals and initiatives as well as upgrade their information and communication exchange with the citizens. This can be achieved through the creation of a cross-media ongoing campaign that will reach out to a variety of audiences and utilize diverse stakeholder engagement tools.

ICARUS considers stakeholder engagement as a key aspect for a successful implementation of the project and for the exploitation of the project outcomes and impacts. This is true for several reasons as ICARUS aims to be of practical value, and stakeholders bring 'practitioners' knowledge' to the project. Such knowledge can help to value the possible economic, social and environmental costs and benefits of air pollution and climate change mitigation options in an urban context, and ask, and

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answer, the right questions. Second, stakeholder engagement is important for the implementation of prioritized mitigation options within an urban or country context. One of ICARUS aims is to explore how contextual factors (economic, social, technical, political) shape successful deployment and diffusion of mitigation options. Without stakeholder inputs, it is impossible to obtain a good understanding of possible contextual factors and identification of possible measures to address these factors. Finally, in order to ensure that the main conclusions from ICARUS address the right groups of decision makers in the right form, it is important that the ICARUS team consults with stakeholders on communication and dissemination strategies and collaborates with them on implementation.

For all the reasons above all the ICARUS partners considered stakeholders pro-active engagement an essential activity within the project. To this aim a significant effort was made by all ICARUS partners to actively engage city authorities and other local stakeholders on the local/regional level to discuss and to identify policies and measures to reduce air pollution and face climate change in the ICARUS cities. This resulted in the organization of ca. 50 meetings complemented by numerous teleconferences and email exchanges. In some cities this activity led to the signature of formal cooperation agreement between ICARUS partners and the city authorities which will help us to further exploit ICARUS outcomes also beyond the project life.

The main outcomes from the close and constant interactions with local/regional stakeholders are summed up below:

- ICARUS can provide additional air quality data that are not available in Municipalities
- Information in source apportionment is crucial, because the identification of major sources will result in the most efficient interventions for combating air pollution
- ICARUS provides the tools for the quantification of the benefits of the various policies and measures
- DSS is of particular interest for the various stakeholders that are interested in assessing the available measures in a comparative way
- The detailed spatial resolution analysis provided by ICARUS provides detailed information of the hot-spots and areas of an urban canopy where interventions are needed at the most
- A lot of discussions with stakeholders were related to the available policies and measures that are already foreseen or under discussion for implementation. The methodological tools provided by ICARUS offer unique opportunities for evaluating the available options, as well as for optimizing their implementation. In Thessaloniki, the study carried out by the AUTH team resulted in the optimization of the Metro lines, so as to reduce traffic burden from specific areas and to increase the benefits of reduced air pollution.
- In addition, the technological capacity provided by ICARUS in the city of Athens (ADDMA is a partners of ICARUS) offered the innovation potential for selecting Athens as the City that is the capital of innovation for the year 2018, as well as its election as chair of the global network of Resilient Cities taking the helm after Washington DC (USA).