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Title: FINAL PLAN FOR USE AND DISSEMINATION

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FINAL PLAN FOR USE AND DISSEMINATION

As specified within the Annex 1 'Description of Work' for URGENCHE, dissemination has taken a critical role within the project, with Work Package 14 dedicated to enabling the dissemination strategy, i.e. to:

- i. Implement the project website to act as an information exchange facility;
- ii. Support public and internal communication (website, reports, newsletter, web conferences, peer-reviewed literature, etc.);
- iii. Produce information materials (brochures, reports, meetings, workshops, proposals);
- iv. Make links to Environment and Health activities/portals;
- v. Organise training workshops on spatial statistics, GIS tools and data merging to ensure project partners are aware of latest developments and understand the requirements and deliverables of Work Packages; and
- vi. Organise annual scientific project meetings.

In the event, most of this has taken place subject to an ongoing practical assessment of the best use of opportunities, as described below:

Website

The website was developed and may be viewed at www.urgenche.eu . Updating is planned for the foreseeable future as the project outcomes mature and this web address is quoted in briefings (see below).

Internal Communication

A formal series of meetings has taken place to match as closely as practicable the stated milestones, as well as day-to-day communication mainly by e-mail but also with telephone and teleconferencing.

Meetings: Truro October 2011 / Stuttgart January 2012 / Suzhou (& visit Xi'an) - First Conference September 2012 / Thessaloniki April 2013 / Basel August 2013 / Kuopio February 2014 / Rotterdam – Second Conference June 2012

Training sessions on the various tools and techniques including GIS were delivered at the most appropriate points in the project progress within the meeting agendas.

Frequent ad-hoc discussions within and between organisations have also taken place.

External Communication

Several peer-reviewed papers have been either published or submitted to date, as listed in the Final Report. These were partly in response to specified project deliverables, as well as taking other related opportunities that have emerged, and cover the range of research areas within the project in a comprehensive manner.

A large number of other activities have taken place, as listed in Table A2 in the Final report. These include forty-seven oral presentations on various aspects of the work, mainly to conferences and symposia of potential opinion-formers in relevant scientific and public

communities. Also, a number of workshops have been run for external audiences and many poster presentations.

In addition, it may be noted that significant meetings have taken place involving partner representatives with key players within city administrations, including some very important liaison in China to provide validity to the policy advice.

Plan for Further External Dissemination

In line with the proposal for information materials and having considered the needs of the potential audience within city planning and related professional departments, an initiative has been devised and planned to produce professional information sheets capturing the key policy-related messages from each project area. These are to be distributed electronically to cities and other relevant opinion-formers during the early part of 2015, with printed versions available where useful (meetings, future conferences, etc.). An example of the sheets is appended.

This concept was adopted by consent from the partners and advisory group on the basis that it will reach a far larger and more representative population than other approaches, such as invitations to a presentational event, a method which is often used but typically narrows the audience to those available by proximity and time. The information sheets will provide information around 'bullet-point' style key outputs and will give contacts, including the website address so that real-time updating of future developments thereupon will be a much more useful exercise than would otherwise be the case.

In addition to this ongoing work in promoting current policy outputs, the nature of this project has been to predict forward developments over time and hence the potential remains for future assessments leading to papers and presentations of progress and learning. The research-based partners will remain alert to any such opportunity.



Reducing carbon dioxide emissions from urban road traffic requires both technological and local measures

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About the research

Urban road traffic contributes about 10% of all European carbon dioxide (CO₂) emissions. Within the European-funded project *Urban Reduction of Greenhouse Gas Emissions in China and Europe (URGENCE)*, a study was conducted on the impact on air quality of CO₂ reduction measures in urban road traffic.

Case studies included: the introduction of biofuels in Kuopio (Finland); extending the metro system in Thessaloniki (Greece) and Xi'an (China) to increase the level of public transport; a 10% reduction of private cars and the introduction of 50% electric-powered private cars in Rotterdam (the Netherlands), Basel (Switzerland), Xi'an and Suzhou (both China); and a combination of these traffic measures in Stuttgart (Germany).

The potential effects in 2020 from these scenarios on CO₂ emissions from road traffic and on air quality were compared to a "business-as-usual" scenario in 2020. This was examined in reference to 2010 figures, enabling health impact assessments to be produced for each city in 2010 and 2020.

This research examines the contribution of road traffic to CO₂ emissions in 2010 and 2020 in five European and two Chinese cities and the impact of CO₂-reduction measures on air quality and health.



Policy implications

- The implementation of more stringent national CO₂ emission standards (zero-emission) for road traffic is the most effective measure to reduce CO₂ emissions from urban road traffic. This is beyond the control of local authorities and requires action at the level of the European Union and the central Chinese Government.
- The most effective local policy to reduce CO₂ emissions and improve air quality, health and well-being is to facilitate and stimulate physical (cycling, walking) and public transport. Such measures and policies are within the control of local authorities.

Contact the researchers

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Key findings

- Compared to 2010, traffic-related CO₂ emissions will stabilise in the European cities and will increase by approximately 40% in the Chinese cities in 2020.
- Air pollution of soot, nitrogen dioxide (NO₂) and particulate matter (PM_{2.5} and PM₁₀) concentrations in the Chinese cities are a factor 3 to 5 higher than in the European cities in 2010 and 2020.
- Over the period 2010-2020 air pollution emissions will reduce due to cleaner technology in all sectors, both in China and Europe. In Europe, this will result in lower concentrations of all pollutants. In China, pollutant concentrations are likely to remain constant for particulate matter (PM_{2.5} and PM₁₀), to decrease for soot (elemental carbon) and to increase for nitrogen dioxide (NO₂) as a result of economic growth (see 'further information' for an explanation of the pollutants).
- Stringent national emission standards (zero CO₂ emissions) are more effective than local measures in Europe and China.



Further information

In this study, the annual average concentrations of nitrogen dioxide (NO₂), particulate matter (PM_{2.5} and PM₁₀) and soot (elemental carbon) were modelled in all cities for 2010 and 2020. The air pollutants NO₂, PM_{2.5} and PM₁₀ are regulatory components in Europe and China, while elemental carbon is a sensitive indicator for exhaust emission from road traffic. The population-weighted average for each pollutant was derived per city and used for health impact assessment in 2010 and 2020.

This urban road traffic-focused study forms part of the *Urban Reduction of Greenhouse Gas Emissions in China and Europe (URGENCE)* project. Other studies have covered themes: housing and energy; and cities: five in Europe and two in China.

You can visit the project website: urgenche.eu

For further reading on this topic please see: Keuken M.P., Jonkers S., Verhagen H.L.M., Perez L., Trüeb S., W.-J. Okkerse, Liu J., Pan X.C., Zheng L., Wang H., Xu R., Sabel C. (2014) "Impact on air quality of measures to reduce CO₂ emissions from road traffic in Basel, Rotterdam, Xián and Suzhou." *Atmospheric Environment* 98:434-489

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