CITEAIR II

Newsletter

N°2 - December 2009

Editorial

CITEAIR II has now been running several months! Going beyond the objective of CITEAIR I, this follow-up project is facilitating the exchange of excellence on air quality management and its synergies with climate change mitigation, while enhancing comparisons between cities and information to the public on air quality.

While climate change is currently getting major political and media attention with the preparation of the world climate talks taking place in Copenhagen in December, air pollution and its detrimental effects on the health of European and world citizens should not be considered as a minor concern. It is possible to take measures which will both help tackling climate change and improve air quality. In this respect, CITEAIR II has started developing a new methodology to combine greenhouse gases (CO_2) emission inventories with existing air pollutant emission inventories (see article on *Emission inventories*).

With the adoption by the European Commission of both the Communication on 'A sustainable future for transport' and the Action Plan on urban mobility in the last months, transport and mobility seem to be another item put high on the European political agenda. Again, CITEAIR II promotes an integrated approach by giving the same consideration to air quality, climate change and mobility concerns, through the development of a new Traffic & Mobility Indicator to enable the immediate comparison of mobility levels across European cities in a standardised way (see article on *Traffic and Mobility indicator*).

As far as air quality is concerned, further progress is made by CITEAIR II to further develop a common European air quality index and provide a forecast of it in different cities (see article on *Urban Air quality forecast*).

Information and awareness-raising on air quality in European cities have also come one step further with the increasing number of cities providing data to the Airqualitynow website which is now also available in several languages (see article on *Air qualitynow.eu*).

While CITEAIR II is doing its part of the job to help improving air quality in Europe, its outcome can only be successful if appropriate publicity is given to the topic air quality. It is therefore encouraging to see that last CITEAIR II Air quality Conference attracted quite a large audience (see article on the *Air Quality Conference and workshops*). Awareness-raising can however not be efficient with a one-shot event only. More events and initiatives are needed! Some of them are outlined in this newsletter.

Improving our air quality is a collective effort! We would therefore welcome any related information that you would like to share with us. As a city, please do also contact us if you would like to make your air quality data available on the Airqualitynow website (contact: info@citeair.eu).

We wish you a pleasant read!

Karine Léger, Airparif
Lead Partner CITEAIR II

Air Quality Conference and workshops

CITEAIR II Air Quality Conference was hosted by Ile–de-France regional council in Paris on 3 June 2009. The conference attracted more than 100 participants. It addressed the implementation of European air quality directives, and current European initiatives to improve air quality and provide information to the public. CITEAIR II also presented its aims and working assumptions.

The conference was targeted at experts and decision makers in the field of air quality and transport. Thanks to speakers from DG environment, Berlin, London, EEA, University of Brighton and Aspa!

On the day after the conference (4 June), two Networking Workshops were organised by CITEAIR II for professionals in emission inventories and mobility indicators. Concepts for integrating CO_2 in emission inventories and options for mobility indicators were presented and discussed.

All presentations, reports and pictures related to these three events are available at:
http://www.citeair.eu/
(page "news and events).

CITEAIR II - Air Quality Conference - Paris, 3 June 2009

European Union
European Regional Development Fund

Co-financed by the ERDF

INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

Made possible by the INTERREG IVC Programme

Traffic and Mobility indicator

Urban mobility plays a key role in the sustainable development of a city, as it has impacts on both the quality of air and the emission of greenhouse gases. Traffic congestion is also considered by most people as the main agent for the deterioration of living conditions in our towns. In the CITEAIR II project, efforts are currently undertaken to define, test and implement an indicator to assess traffic & mobility situations in European cities.

The Traffic & Mobility Indicator should enable the immediate comparison of mobility levels across European cities in a standardised way, and help raising awareness on the importance of reducing mobility generated emissions to remain both healthy and mobile.

In order to describe mobility, and so the natural need of people to move, the first input for calculating the indicator will come from traffic measurements. Travel time, speed and flows will be given special attention. These variables can be monitored in cities by means of a wide range of existing technologies used for local traffic management and control.

Once information on traffic has been gathered (not only related to private vehicles but also to other transportation modes), additional input data will be necessary to take into account the characteristics of the transportation systems and the state of air quality in the cities involved in the project (i.e. average trip distance, average travel time, fleet composition, air quality index). This data will help evaluating both the levels of air pollution and the exposure of persons to pollutants. It will also take into account the fact that one minute more in the traffic means one minute less in other background situations (home, office, leisure).

The levels of exposure will be measured by using the methodology of the CITEAIR II Air Quality Index (CAQI), currently applied to air quality data in 60 European Cities.

For more information, please contact marco.cianfano@atac.roma.it.

Emission inventories

CITEAIR II aims to develop, test and validate a methodology to combining greenhouse gases (CO_2) emission inventories with existing air pollutant emission inventories (EIs). This approach is necessary to ensure that measures taken to tackle climate change are not counterproductive for air quality and vice versa.

In order to develop a product that would be suitable for cities, it is important to understand their needs and wishes, to identify what is currently available and the potential for improvements.

To this end, a survey was carried out among the CITEAIR II cities (Paris, Rotterdam, Rome, Prague, Burgas, Maribor and Seville). In addition, several examples of integrated EI management systems were identified in the literature. Consequently, an inventory of existing methods and practice within and beyond the CITEAIR community was made.

As part of the networking activities the concept and the methodology were presented and discussed at a workshop for experts (in Paris in June 2009, see article above). CITEAIR II is interested in receiving additional contributions from cities and experts.

One system, developed by the European Environment Agency (EEA) for EI reporting to the EU, is currently tested for ease of application and versatility to cater for the identified needs. The EEA approach might become the recommended approach for setting up a fully fledged emission management system. Now the testing-phase has come to an end, an integrated urban EI will be built, implemented and tested in the cities.

For more information, please contact sylke.davison@dcmr.nl.

Urban air quality forecast

CITEAIR II is developing and implementing a forecasted air quality index with three levels of complexity to meet the needs and requirements of European cities. Which level a city applies depends on the local conditions and resources (see also http://www.citeair.eu).

The computation of a forecasted CITEAIR air quality index based on the PREV'AIR system addressing the 1st level of complexity is currently investigated.

As first step of this study, a statistical approach is being developed to locally forecast the concentrations of ozone, NO_2 and PM10 using PREV'AIR outputs and additional predictors such as meteorological forecasts, concentration measurements of the previous day, the day of the week, the time of day, etc.

Promising results have been obtained for Rotterdam. Linear models have been established to predict hourly or maximum daily concentrations one day in advance at each monitoring station.

These models have been tested using data from 2008 and validated against data from 2009. They now vary according to the season.

PREV'AIR forecasts are significantly improved by the statistical adaptation. During the coming months this approach will be applied to Seville and Prague and further tested using local data.

For more information, please contact frederik.meleux@ineris.fr.

Save the date!

CITEAIR II Workshop, Ljubljana (1-2 June 2010)

The latest developments on the CITEAIR II project will be presented to you in Ljubjana on 1-2 June 2010.

More information will be available in Spring 2010 on www.citeair.eu.

Airqualitynow.eu

The acceptance of the webservice www.airqualitynow.eu and the way how urban air quality data are made available and comparable for the citizens is constantly increasing. This is underpinned by the fact that many new cities have joined the common operational website since the beginning of 2009.

Welcome to the new CITEAIR cities!

The cities that joined airqualitynow.eu since the beginning of the CITEAIR II project are: Rennes, Lyon, Grenoble, Saint-Etienne, Valence, Angouleme, La Rochelle, Niort, Poitiers, Orléans, Tours, Sevilla, Burgas, Aix-en-provence, Avignon, Cannes, Marseille, Nice, Toulon, Montpellier, Nimes, Perpignan, Arles, Martigues, Salon de Provence, Mulhouse, London and Brno. **In total, there are now about 60 cities delivering their data to the platform in near real time.**

The CITEAIR II consortium would like to thank those newly committed cities as well as the cities which have been participating in the website for a longer period. CITEAIR II is also looking forward to welcoming more new cities!

So far www.airqualitynow.eu was only available in English. In order to enhance the usefulness of www.airqualitynow.eu, especially for the general public, **CITEAIR II has started to provide multilingual pages. The first two additional languages which are available now are Dutch and French.** Other languages will be implemented in the coming months.

Those multilingual pages make the platform more easily understandable for the local population. It is expected that the availability of a multilingual webservice will attract further cities to join and will lead to an extended use of the service.

For more information, for suggestions to improve the website or if you would like to contribute to the translation work, please contact contact@airqualitynow.eu.

Other AQ news

CITEAIR Air Quality Index applied in the EEA's PAQ Project

The European Environment Agency (EEA) has the objective to provide information on daily air quality across Europe. The EEA builds on achievements which have resulted from funding programs at European and national levels. Of particular note in this context is the Global Monitoring for Environment and Security (GMES) initiative of the European Commission and the European Space Agency.

In 2009, the EEA conducted the PAQ project (Promote – Legacy Air Quality Index for Europe). The goal of the project was to design, develop and implement a pilot system to use near-real time data included in the European Environment Agency data exchange system (Airbase), coupled with modelled air quality information coming from the PROMOTE and/or other GMES projects. The resulting air quality assessment is presented and published daily as air quality index values across Europe based on the CITEAIR common air quality index (CAQI) and the methodology developed since 2003 in the previous and current project (Common air quality index, CAQI).

It is expected that the development and implementation of this system will significantly contribute to the testing of the approach advocated in the Shared Environmental Information System policy initiative (http://www.eea.europa.eu/about-us/what/shared-environmental-information-system).

The PAQ project is executed by a consortium led by the German Aerospace Centre (DLR). Citeair is included in the steering committee of the project since it was important for all the partners to insure the consistency of the methodology used for calculating those Citeair indices provided to the public both
- on www.airqualitynow.eu based on the data sent by 60 cities
- and on the PAQ project based on Airbase data and modelling systems

A licence agreement was also signed on this purpose.

For more information, please contact karine.leger@airparif.asso.fr and bert.jansen@eea.europa.eu

SIMAIR: a new internet tool to evaluate local air quality

A new computer-based tool has been developed in Sweden to help local authorities evaluate air pollution at street level. It allows the results to be compared easily with EU air quality standards.

SIMAIR is a user-friendly, internet-based tool, designed for the road network throughout Sweden. It can assess concentration levels for four pollutants: fine particles (PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO) and benzene. Local authorities can calculate total pollution levels for local street sites and, within 10 seconds, receive a report which compares the simulated concentrations at that location with EU limits. In addition, SIMAIR separates long range, urban and local (street) contributions to total pollution levels.

Under the EU Air Quality Directive, 2008/50/EC, ambient air quality must be assessed and air pollution maintained within limit values for clean air. Swedish legislation requires local authorities to monitor air quality in areas where pollution concentrations are expected to be above certain thresholds. In Sweden this may be the case for urban populations as small as 10,000 people. Setting up and maintaining the necessary air quality monitoring equipment can be expensive.

A major benefit of SIMAIR is that it estimates, or models, the impact on air quality of local street emissions. This cuts costs as it may reduce the number of monitoring facilities needed for an assessment, although it is unlikely to replace them altogether. Air quality data from the remaining stations could be used to evaluate the system.

Contact: lars.gidhagen@smhi.se.

Source: Gidhagen, L., Johansson, H., Omstedt, G. (2009) SIMAIR – Evaluation tool for meeting the EU directive on air pollution limits. Atmospheric Environment. 43: 1029-1036.

Commission approves limited list of derogations on air quality

According to EU legislation, the PM_{10} limit values should have been achieved in all member states by 2005, but the 2008 air quality directive (2008/50/EC) opens the way for member states, under strict conditions and for specific parts of the country, to extend the time for meeting the PM_{10} limits until June 2011, subject to approval by the Commission.

On 2 July 2009, the Commission approved time extensions until June 2011 for 19 air quality zones in Austria, Germany and Hungary, but raised objections to the other 75 proposed exemptions.

For those remaining 75 zones, the Commission considered that the conditions had not been met, in many cases because insufficient data had been provided or because the measures outlined in the air quality plans submitted do not demonstrate that the standards will be met at the end of the exemption period.

Member states have still an opportunity to re-notify for zones where the Commission has raised objections if they provide new information to demonstrate fulfilment of the conditions.

Contact:
ec.europa.eu/environment/air/quality/legislation/time_extensions.htm.

CITEAIR II partners