

90 min symposium

February 15 2015 from 1:00 PM to 2:30 PM

Earth observation systems and citizen scientists tackle urban environmental hazards

Through the use of earth observations both remote-sensing and in-situ techniques, new opportunities are being created for citizens to become involved in the monitoring of the urban environment and megacities for threats and economic loss that could affect millions of inhabitants. In particular, this session reviews the role of global earth observations (GEO) in the context of recent events which have had an impact on cities such as smog in Paris and Brussels, the Saharan sand cloud in London, and the disruption of city traffic by ash from far-off volcanos. The session will explore how earth observations can bring about a better assessment of these events helping to predict and mitigate their impact. It will also present examples of longer-term development of cities viewed from space or through the integration of space and in-situ data.

The concept of Citizens' Observatories and their added value in the context of the GEO will be explored showing how the lay-person can contribute. The speakers will look at the possible return in terms of innovation and resource saving; the extent to which the involvement of citizens will contribute to delivering better and more transparent assessments; how citizens can become engaged in caring for their urban environment; the current shift of paradigm from citizen access to environmental information to a real participation in the provision of environmental information faced by public authorities; the impact of the technological revolution from costly, static devices to portable, cheap mobile applications; and the contribution citizens can make in developing and delivering environmental policy related to a sustainable urban management.

Organiser:

Gilles Ollier, *European Commission, Directorate General for Research and Innovation*

Moderator:

Robert-Jan Smits, *Research Directorate-General, European Commission*

The session will be introduced outlining the needs for observations and monitoring regarding the urban environment and the potential role of Citizens in collecting information regarding the environmental conditions of their cities.

Speakers:

Riley Duren, *Jet Propulsion Laboratory*

Title: *The Megacities Carbon Project*

The Megacities Carbon Project is being established for the megacities of Los Angeles and Paris, and the presentation will highlight the methods for assessing carbon emissions and rapid improvements in measurement technology to monitor the atmospheric trends of carbon attributed to the world's largest cities.

Alena Bartonova, Norwegian Institute for Air Research

Title: *CITI-SENSE "Development of sensor-based Citizens' Observatory community for improving quality of life in cities"*

Presentation of the "citizens' observatories" concept to empower citizens to contribute to and participate in environmental governance, to enable them to support and influence community and societal priorities and associated decision making

Domenico Giardini, ETH Zurich

Title: *Earthquake risk mitigation using social media and sensor-based citizen's participation*

The presentation will cover recent experiences and developments using social media (twitter, internet) and personal devices (smart-phone apps, personal health devices) to monitor the occurrence of earthquakes and observed damage, provide data for local scientific investigations, as well as the prospects for life-saving applications in earthquake emergency situations.

Thomas Esch, German Aerospace Center (DLR)

Title: *Global Urban Observation and Information - the GEO task SB-04*

The presentation will describe the coordination of urban observations, monitoring, forecasting, and assessment initiatives worldwide in the context of the GEO initiative