Autorità di bacino dei fiumi dell'Alto Adriatico (Alto Adriatico Water Authority)

Autorità di Bacino
DEI FIUMI ISONZO, TAGLIAMENTO, LIVENZA, PIAVE, BRENTA-BACCHIGLIONE

in collaboration with

Rai Veneto

organize

International Conference COWM 2016

Citizen Observatories for Water Management

7-10 June 2016 – Venice, Italy

Web-site: www.conwater2016.eu

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Conference venue: Palazzo Labia, Campo San Geremia – Cannaregio 275, 30121 Venezia

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE
European Commission
WESENSEIT Citizen Water Observatories
Società Idrologica Italiana Italian Hydrological Society
APRE Agenzia per la Promozione della Ricerca Europea
CONSIGLIO NAZIONALE DEGLI INGEGNERI
CONSIGLIO NAZIONALE DEI GEOLOGI
Consiglio Nazionale Geometri e Geometri Laureati

The city of **Venice** will host an International Conference on **7th**, **8th** and **9th June 2016**, titled: "**Citizen Observatories for Water Management**".

The conference will focus on the potential of Citizen Science in the European water innovation landscape, and in particular in the fields of flood risk management, environmental monitoring and meeting the challenges of the Water Framework Directive (WFD).

The Conference will be an opportunity for actors in the field of science and innovation to exchange experiences on the development, implementation and use of new technologies to bring water-related issues closer to citizens.

A technical visit will take place on 10th June 2016 with the aim to showcase an example of an active Citizen Observatory.

Introduction

Citizen observatories are emerging as a virtual and physical place where citizens and decision makers cooperate to gather and share information to promote innovative and shared solutions. Strategic decisions and policies that impact society and the environment require intensive data collection and interpretation. Such information provides an important basis for long term planning as well as short term response (e.g. to flooding, drought, pollution events, cyanobacterial blooms).

The COWM 2016 conference will explore the role and opportunities for active citizen participation in environmental monitoring and policy making. The event will provide opportunities to engage with researchers, policy makers and practitioners actively involved in improving our understanding of citizen science initiatives. Participants will discuss the growing potential of Citizens' Observatories in empowering the society and improving the resilience at the community scale.

The meeting will bring together social scientists, surveyors, engineers, scientists, and other professionals from many countries involved in research and development activities in a wide range of technical and management topics related to citizen observatories and their impacts on society and how to maximize the benefit of data emerging from citizen observatories.

The research topics promoted in the Conference are of common interest for universities, research institutions, government authorities and professionals, in particular for the implementation of the plans related to the European Directives 2007/60/EC and 2000/60/EC.

Autorità di bacino dei fiumi dell'Alto Adriatico (AAWA) intends to promote the initiative with the high patronage of:

- the Italian Ministry of the Environment and Protection of Land and Sea;
- the Directorate-General for Research & Innovation (EC);
- the Italian Civil Protection Department;

with the scientific partnership of:

- the European Project WeSenseIt;
- the Italian Hydrological Society (IHS – SII);

and the patronages of:

- the Agency for the Promotion of European Research (APRE);
- the Italian Council of Civil Engineers (CNI);
- the Italian Council of Geologists (CNG);
- the Italian Council of Surveyors (CNGeGL).

Conference topics

The following list covers some of the topics to be presented at COWM 2016:

- The role of Citizen Observatories in catchment monitoring and management (including water quality and ecosystems)
- Citizen Observatories as support for Crisis Management and Disaster-resilience (enhancing resilience of communities and emergency services through smart technologies)
- Methods and Technologies at the Service of Citizens (ICT and Innovative Sensors, Remote Sensing, Crowdsourcing and Sensors data Integration, Data Assimilation Techniques, Modeling)
- The Social Dimensions of Citizen Observatories (engagement strategies to enhance citizen participation in public governance, including leveraging incentives and addressing barriers for citizen participation and data sharing)

Scientific Committee members:

Bartonova Alena - Research Director of NILU UAE, member of Scientific Committee on Health and Environmental Risks, coordinator of CITI-SENSE Project

Berod Dominique - Senior expert on Water strategy chez Group on Earth Observation (GEO)

Ciravegna Fabio - Professor of Language and Knowledge Technologies at the Department of Computer Science, University of Sheffield

Ferri Michele - Scientific Development Manager, Alto Adriatico Water Authority

Finotto Luca - Technical Manager at CAE S.p.A, leader for meteorological monitoring and EWS

Frisullo Serafino - Member of the Italian Council of Surveyors (CNGeGL)

Graziano Gianvito - President of the Italian Council of Geologists (CNG)

Huwald Hendrik – Professor of Environmental Sciences and Engineering, Ecole polytechnique fédérale de Lausanne (EPFL)

Lobo-Ferreira João-Paulo - Head of the Groundwater Division at the Hydraulics and Environment Department of Laboratório Nacional de Engenharia Civil (LNEC)

Mariani Massimo - President of the European Council of Civil Engineers (ECCE) and member of the Italian Council of Civil Engineers (CNI)

Mathieu Pierre-Philippe - Earth Observation Science & Applications Department of the ESA

McCarthy Simon - Flood Hazard Research Centre, MiddleSex University London

Sieprawski Marcin - Head of Big Data Lab, Software Mind

Solomatine Dimitri - Professor of Hydroinformatics, UNESCO-IHE Institute for Water Education

Stepenuck Kris - Member of the Citizen Science Association board, Extension Assistant Professor of Watershed Science, Policy and Education, University of Vermont

Todini Ezio - Professor of Hydrology at the University of Bologna

Vogel Johannes - Professor of Biodiversity and Public Science at the Humboldt Universität, Berlin, Chair of the European Citizen Science Association - ECSA

Wehn Uta - Senior Lecturer / Researcher in Capacity Development and Innovation, UNESCO-IHE Institute for Water Education

COWM 2016 Citizen Observatories for Water Management

DRAFT AGENDA

7 JUNE 2016		8 JUNE 2016		9 JUNE 2016	
Plenary Session		**Parallel Sessions**		**Parallel Sessions**	
09:30	Welcome and greetings	**09:30**	**Session C** Data integration methods, data assimilation techniques, water modelling	**09:30**	**Session B** Resilience and territorial safety
10:00	**Introduction of the Citizen Observatory concept**		**Session D** Public participation mechanisms		**Session D** Citizens involvement in decision making: organizational, legal and societal aspects
11:30	**Overview of the potential application of Citizen Science, also beyond water world**	**12:00**	**Poster session**	**12:00**	**WORKSHOP: how to develop a volunteer water monitoring program** - Part I
13:00	**Lunch time**				
14:00	**Exhibition itinerary ***				
Parallel Sessions		**Parallel Sessions**		**Plenary Session**	
15:30	**Session A** Citizens Observatories and Environmental Monitoring	**15:30**	**Session A** Tradional knowledge potential in environmental management	**15:30**	**WORKSHOP: how to develop a volunteer water monitoring program** - Part II
	Session C New approaches for data capturing and validation		**Session B** Citizen Communities engagement in Crisis Management	**16:30**	**Lesson learned and new potential of COs** Lecturers: chairmans from the parallel sessions
18:00	**Closing time**				

10 JUNE 2016
Technical visit **8:30 - 16:30** including travel time (the organization will take care of the logistics)

Sessions titles:

A) Citizen observatories as support for catchment monitoring and management

B) Citizen Observatories as support for crisis management and disaster resilience

C) Methods and technologies for Citizen Observatories

D) Social dimensions of Citizen Observatories

*** The Exhibition Itinerary will be an opportunity to showcase as well as to find out about advanced technology related to the Citizen Observatories, new starting projects and innovative modeling approaches**

Conference: 7, 8, 9 June 2016

Sessions:

A) Citizen observatories as support for catchment monitoring and management

The contribution of trained citizens and communities in catchment-based monitoring and management is a powerful means to protect and improve our water environment. Citizen observatories can facilitate the acquisition of large quantities of high resolution environmental data across a broad geographic area, necessary to better understand the conditions of our aquatic ecosystems and, more generally, of the environment. Collaboration between scientists, agencies, river trusts and citizens enables the collection and analysis of fundamental ecological and environmental data on larger spatial and temporal scales than otherwise possible, and the sharing of traditional knowledge.
These collaborations provide important indirect benefits, as projects involving communities and citizen scientists are inclusive and generate more informed public discussions and public action. Throughout Europe and the world, novel and innovative citizen science projects are being developed with multiple objectives and varying success.
This session will focus on novel approaches in citizen observatories focused on the water environment and integrated catchment management. The session will also consider key lessons learned, best practices and guideline the range of ongoing projects as well as explore new collaborations.

B) Citizen Observatories as support for crisis management and disaster resilience

Crowd sourcing in emergency management is emerging as a key-strategy for the active participation of population reducing costs of preparation, response and recovery.
Crisis management and societal resilience capabilities are regularly challenged and constantly need to evolve to cope with new trends, such as changing crisis situations and the increasing connectivity of citizens.
Enhancing active participation and awareness of the population provides important benefits in territorial management and risk mitigation and, as a direct consequence, improves the resilience of communities and emergency services.
This session will focus on new approaches and solutions for strengthening crisis communication and facilitating community engagement and self-organization, and for improving the coordination of professional responders (e.g. smart technologies as solutions for civil resilience and professional response, methods and infrastructure for individual and organizational learning). The session will also consider key lessons learned, best practices and experiences emerged from ongoing projects as well as explore new collaborations among all stakeholders in Crisis management who are concerned by societal and technological innovation.

C) Methods and technologies for Citizen Observatories

Information and communications technology (ICT) and models are drivers to include social innovation in many aspects of catchment management, enabling citizens observatories to increase participation and to translate data capturing into meaningful information.
The Citizen Observatory promotes communication and supports the sharing of technological solutions (e.g. sensors, mobile apps, web portals) to enable citizens to become active stakeholders in information capturing, evaluation and communication for the water environment. This new

approach in water management raises the necessity of best using and elaborating the citizens' observations and understanding of environmentally/water-related problems.
This session will focus in on technologies and methods to support Citizen Observatories, including – but not limited to - new approaches to data capturing (e.g. sensors, crowd-sourcing methods, remote sensing technologies), integration methods to combine data from various sources of varying temporal and spatial coverage, cross-validation, data assimilation techniques, water models, agent based models. The session will also consider key lessons learned and best practices emerged from ongoing projects, academic research and practitioners experience.

D) Social dimensions of Citizen Observatories

Citizen Observatories are emerging as an instrument for supporting community-based environmental decision making. Citizen involvement is in fact also strongly recommended by several European Directives (e.g. 2000/60, 2007/60/EC) that require the establishment of public participation mechanisms for their implementation. This raises questions on how to achieve and successfully maintain citizen involvement, community-based decision making and effective and fruitful participation via citizen observatories in view of diverse organizational, legal and societal aspects.
This session will focus on engagement strategies to enhance citizen participation in public governance, including leveraging incentives and addressing barriers for citizen participation and data sharing. The session will also consider key lessons learned, best practices and experiences that emerge from ongoing projects as well as it will be an opportunity for exploring new collaborations.

Technical visit: 10 June 2016

A technical visit will be organized with the aim to showcase an active and operational example of Citizen Observatory.

During the visit the conference participants will be accompanied to discover an observatory of citizens operating in the field of environmental monitoring and emergency management, including the technologies for its support.