Citizens' Observatories: Five EU FP7 Projects

CITI-SENSE[1], Citclops[2], COBWEB[3], OMNISCIENTIS[4], WeSenseIt[5]

European Commission

Citizens' Observatory

SEVENTH FRAMEWORK PROGRAMME

Introduction

Citizens' Observatory

Topic ENV.2012.6.5-1: Develop community based environmental monitoring and information systems using innovative and novel earth observation applications.

Five projects started autumn 2012:

- CITI-SENSE
- Citclops
- COBWEB
- OMNISCIENTIS
- WeSenseIt

Their goal: Develop novel technologies and applications in the domain of Earth Observation. Exploit portable devices (smartphones, tablets, etc.) and enable effective participation by citizens in environmental stewardship based on broad stakeholder and user involvement in support of both community and policy priorities.

The projects will enable sharing of data and information through advanced data management strategies based on open e-collaboration, addressing questions of privacy, data standards, quality and reliability.
Projects overview: www.citizen-obs.eu

facebook.com/int.cit.obs

Citizens' Observatories

The Facebook "Citizens' Observatories" group is a communication channels for citizens and stakeholders engaged in "Citizens' Observatories" worldwide.

Acknowledgement: The projects are partially funded by the European Programme FP7/2007-2013 under grant agreement n° 308524 (CITI-SENSE), n° 308469 (Citclops), n° 308513 (CobWeb), n° 308427 (OmniScientis), n° 308429. (WeSenseIt), respectively.

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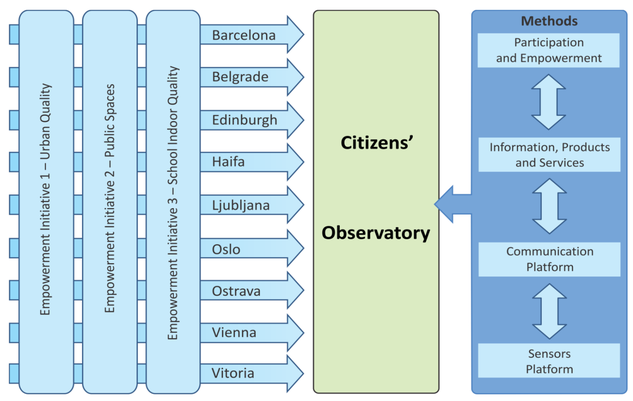
CITI-SENSE

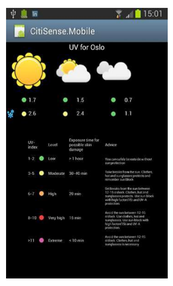
CITI-SENSE (www.citi-sense.eu) is a Collaborative Project, with a duration of four years. The consortium is composed of 28 partner institutions coming from Europe, Israel, South Korea and Australia.

CITI-SENSE aims to empower citizens to participate in environmental governance, by developing up to 30 Citizens' Observatories supporting services related to environmental issues of societal concern.



The project shall:

- Support participatory sensing
- Provide GEOSS compatible data
- Provide environmental information tools
- Relate project data with other data sources
- Enable volunteered geographic information
- Tailor data to the needs of the users
- Enable direct input from the public to environmental governance



CITI-SENSE

CITI-SENSE
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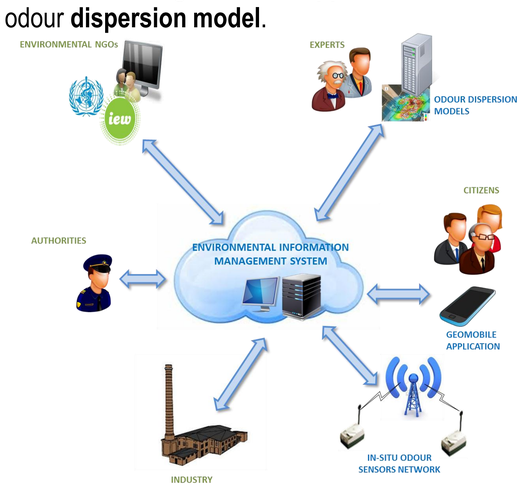
OMNISCIENTIS

Odour is often considered as the 2nd source of complaints after noise, but while concrete actions have been taken to mitigate noise, minor efforts were made against odour. Besides, legislation and the way odour nuisances are dealt with are quite heterogeneous across Europe.

OMNISCIENTIS combines the active participation of the stakeholders, especially citizens, with the implementation of innovative technologies to improve the governance of odour nuisance. OMNISCIENTIS implements an odour monitoring and information system allowing feedback in real-time, based on a **web-based Service Platform**. It integrates the information from the emission collected by **in-situ sensors** (e-noses and meteorological station), the information from citizens' observatories via a **geo-mobile application** and the results of the specific odour **dispersion model**.



The solution is tested and validated on the field, through two Pilot cases: a pig farm in Austria and a major industrial site in Belgium. The major expected benefits are:

- Enhance local environmental governance through a Living Lab approach
- Better cooperation between potentially conflicting parties
- Improve the decision-making capacity of the local authorities
- Tuning the nuisance generating processes, in order to better understand and mitigate the impacts on the neighbourhood.

Omniscientis

OMNISCIENTIS
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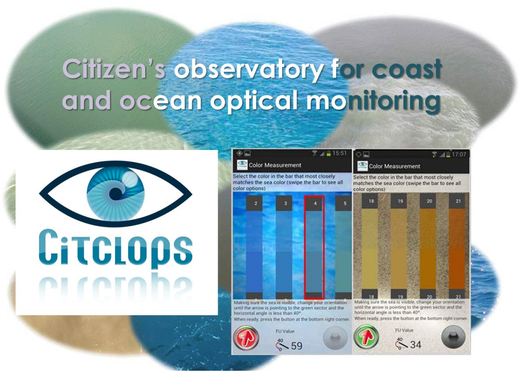
Citclops

Citizens' observatory for coast and ocean optical monitoring

The Citclops action (2012-2015) develops an observatory based on citizens' science applications for the bio-optical monitoring of coast and ocean. Specifically, the Citclops action develops systems to retrieve and use data on the colour, transparency and fluorescence of seawater using low-cost sensors and smart phones along with contextual information. By distributing the sensors widely, citizens are closely involved to assess the state of the water.

Hereby we like to invite you, as a volunteer, to help us with our water quality research. By the end of March 2014 we will introduce a new Citclops smart-phone application to collect environmental data and automatically upload them. We are looking for volunteers, environmentally engaged persons, yachting-club members, scuba divers, students to test our smart-phone app in river, lakes and in the coastal environment, to help us with water-quality observations along broad space and time scales. Check our website for further details.

The year 2014 is a learning year, in which the observations made by the public are stored in a central database. These data are analysed and validated to improve shortcomings of the app and the observational methods.



In 2015 the improved smart phone applications will officially be used by the public to collect water-quality data.

- Everybody can help! -

Citclops
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COBWEB

Project Summary

COBWEB seeks to design, develop and validate the necessary software infrastructure to facilitate and make possible the opportunistic harvesting and quality control of crowdsourced environmental data.

COBWEB Citizen Observatory Web

Verification and testing of the approach and the efficacy of the architectural model will be conducted within the context of the UNESCO World Network of Biosphere Reserves.

UNESCO World Network of Biosphere Reserves

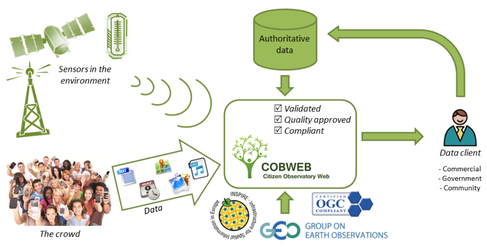
Internationally designated protected areas of the MAB Programme that are meant to demonstrate a balanced, harmonious relationship between people and nature. COBWEB is working with the Dyfi BR in Wales, the Wadden Sea and Hallig Islands in Germany and the Gorge of Samaria and Mt. Olympus both in Greece.

What will COBWEB look at?

COBWEB is focusing on three environmental thematic areas;

- Creation and validation of Earth Observation data products
- Biological monitoring
- Flooding

How will COBWEB work?



COBWEB is required to cooperate within an open e-collaboration framework to establish common methodologies and standards for data archiving, discovery and access within the GEOSS framework. COBWEB will aim to make the data it collects available through GEOSS.

COBWEB
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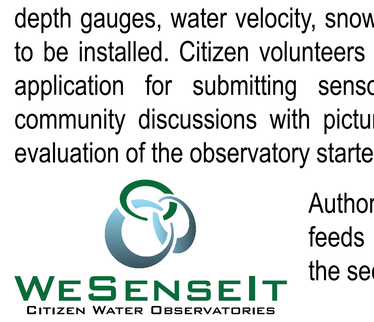
WeSenseIt



WeSenseIt (2012-2016) enables citizens to become active stakeholders in information capturing, evaluation and communication for the water environment including flood risk. The project brings together the expertise of 14 European partners across academic institutions, research centres and industry.

Our citizen observatory, based on understanding citizens' needs, provides a framework in which authorities and citizens cooperate in sharing collective intelligence and develop a shared social and physical situational awareness to help facilitate new approaches to participation in planning, decision making and governance.

We capture data from innovative sensor devices developed within the project used by the citizens; citizens' collective intelligence via social media (e.g. Twitter, Facebook, etc.); and enable communities to upload key information to the observatory via our mobile app. In addition, we have created a network of professional hydrological sensors. All these inform our modelling work.

Our technology is being tested in three case studies: Doncaster, UK; Delftland, NL; and Vicenza, Italy. Professional sensors (sonar water level; temperature; humidity; wind speed; rainfall; soil moisture; water depth gauges, water velocity, snow depth, water quality) have started to be installed. Citizen volunteers have been provided with a mobile application for submitting sensor readings and contributing to community discussions with pictures and text. Our first live formal evaluation of the observatory started in December 2013.

WESENSEIT Citizen Water Observatories

Authorities can view live sensor data feeds and citizen-generated reports via the secure WeSenseIt Platform.

WeSenseIt
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