



The role of citizen science in environment management

Forecasting based on citizens' observatories

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Università di Bologna – Scienze Ambientali, Ravenna (Italy), December 17, 2015, 2 pm



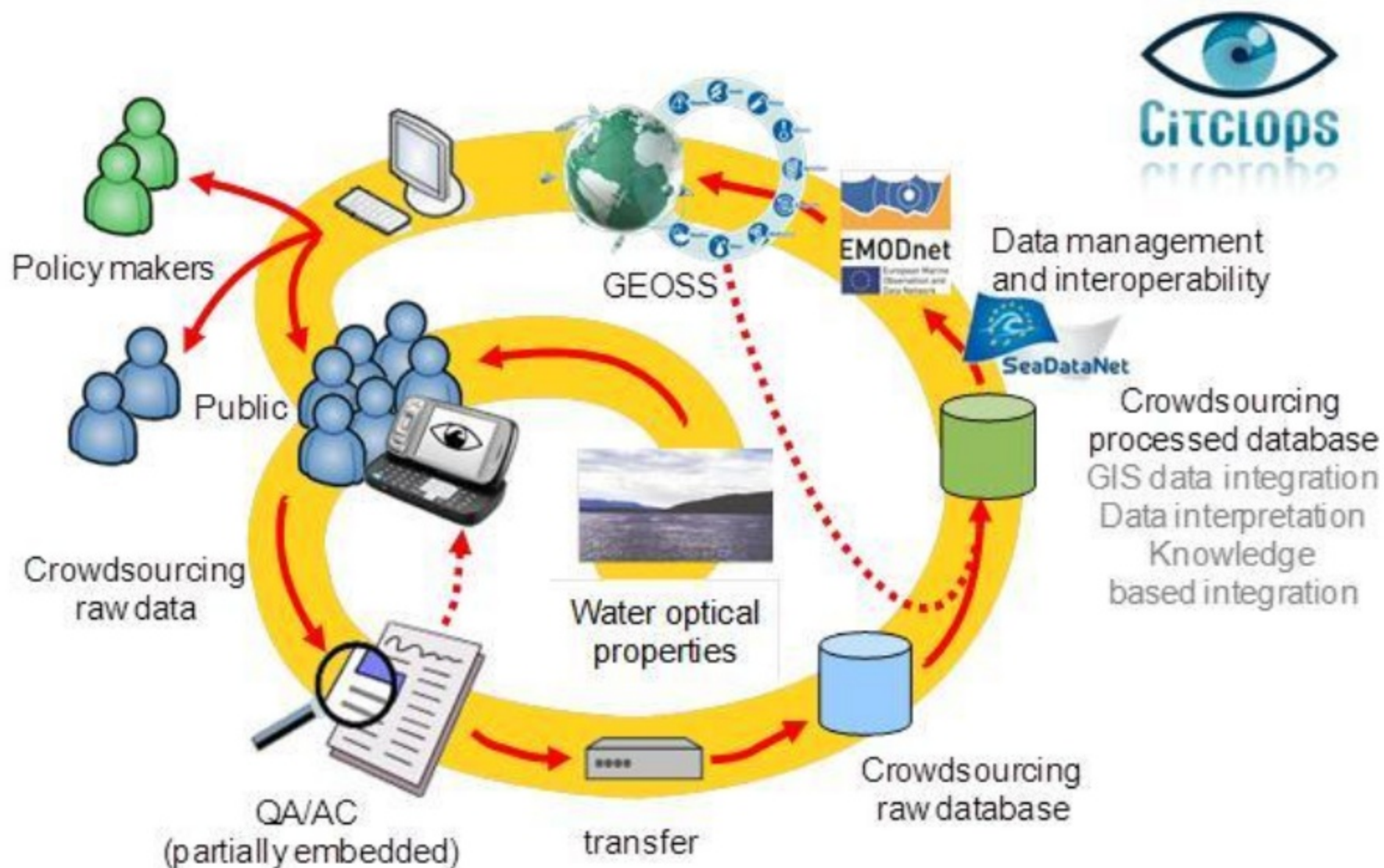
Learning outcomes

- Knowledge of the field of citizen science and current trends that influence it
- Understand the principles and practical aspects of a citizen science project
- Learn about data quality in citizen science

Content: an introduction to citizen science

- Current activities in the area of citizen science online and offline
- Typology of engagement in citizen science
- Citizen Science in a historical perspective and underlying trends
- The case for low resolution in environmental monitoring
- Forecasting based on citizens' observatories

Acquisition, processing, delivery: a new way



Citizens' participation via smart devices

- Citizen science involving people on **training cruises**, on sailing races, on holiday (e.g., scuba diving) in **data collection**



Tall Ship Regatta

*21st Sept. - 4th October 2013:
Barcelona - Toulon - La Spezia*

Citizens' participation via smart devices

- Citizen science involving people on training cruises, on **sailing races**, on holiday (e.g., scuba diving) in **data collection**

Barcelona World Race

2013-2015: around the world sailboat race



Citizens' participation via smart devices

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Color Measurement

Select the color in the bar that most closely matches the sea color (swipe the bar to see all color options)

1 2 3 4

Making sure the sea is visible, change your orientation until the arrow is pointing to the green sector and the horizontal angle is less than 40°. When ready, press the button at the bottom right corner.

FU Value 40 83

Color Measurement

Answer the Questions

Cloud Fraction:

☐ No clouds

☒ Some clouds

☐ Fully clouded

Raining:

☒ Yes ☐ No

Do you see the bottom?

☒ Yes ☐ No

Back Send

☒ I was just playing with the App
The picture I took is not of the sea

Information acquisition



Information delivery (Citclops)

Near Barcelona



A. Ebro Delta

Historic

Now

Water colour



III (FU scale)

Water transparency



1.5 m

Water fluorescence
(400 nm)



6 cps

Harmful algal bloom

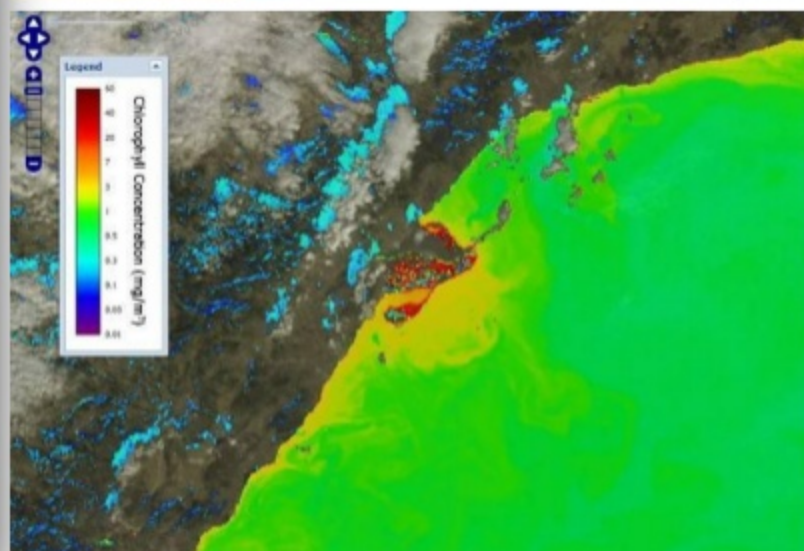


Yes

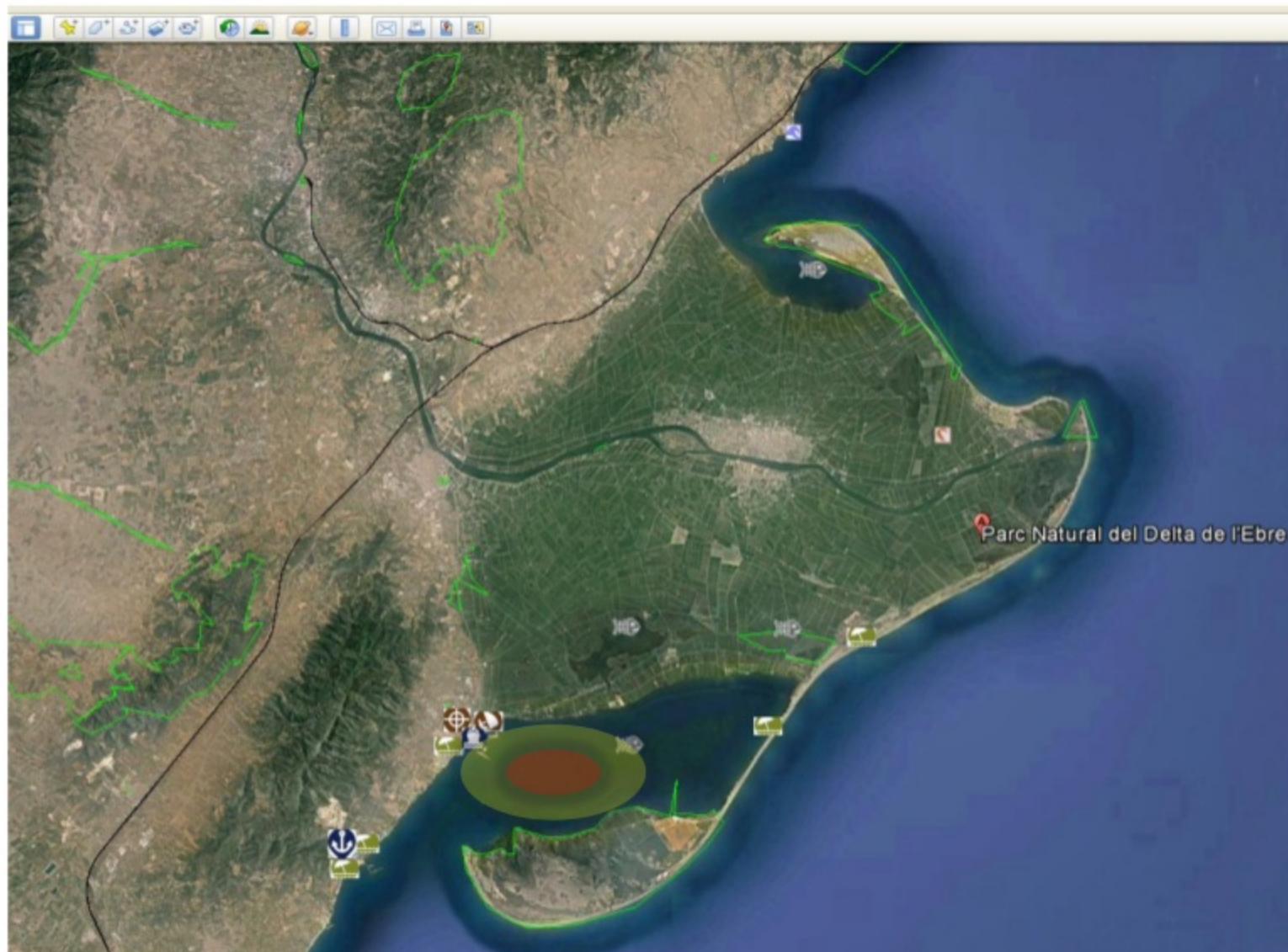
Jellyfish



Yes

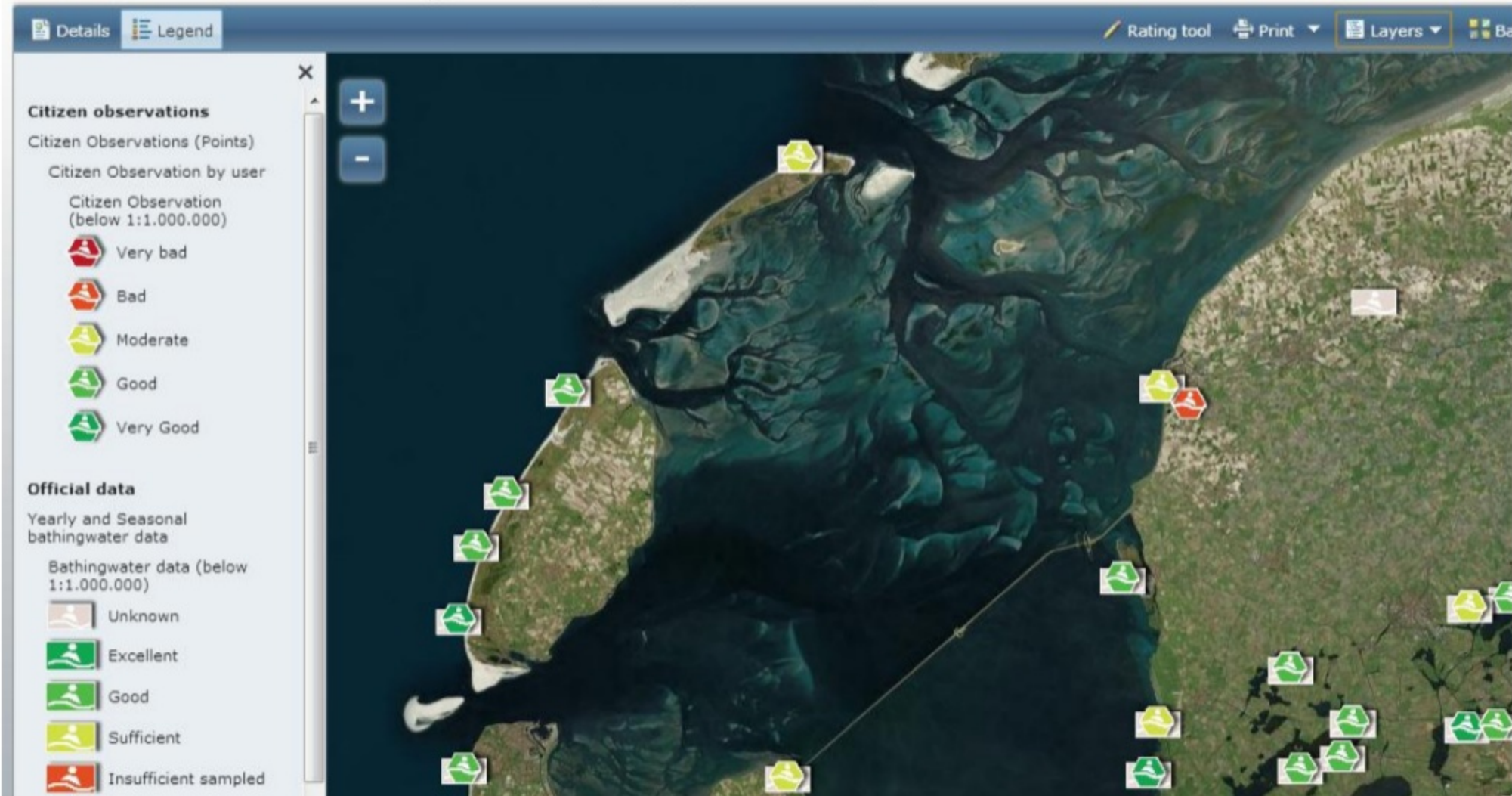


Information delivery (Citclops)



Information delivery (WaterWatch)

WaterWatch - Bathing water quality for Europe



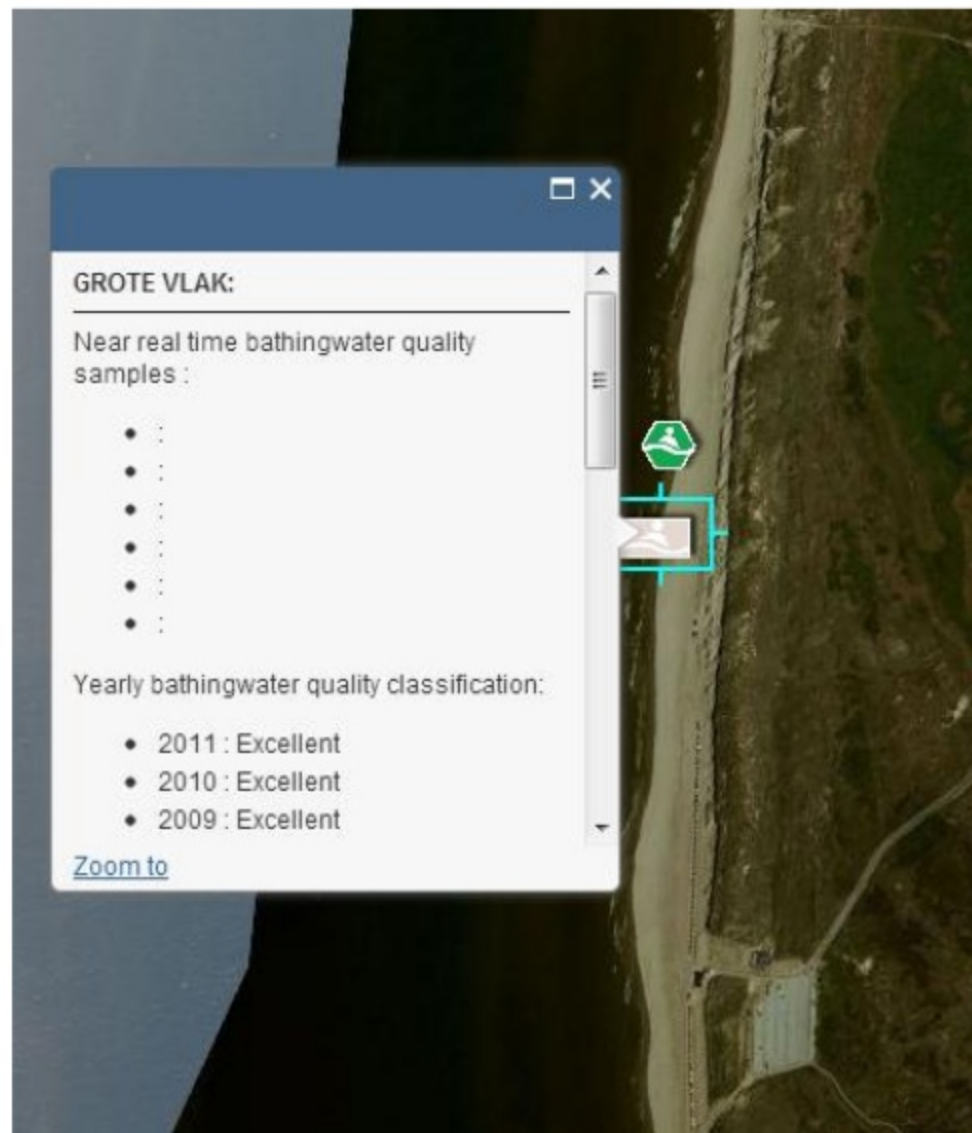
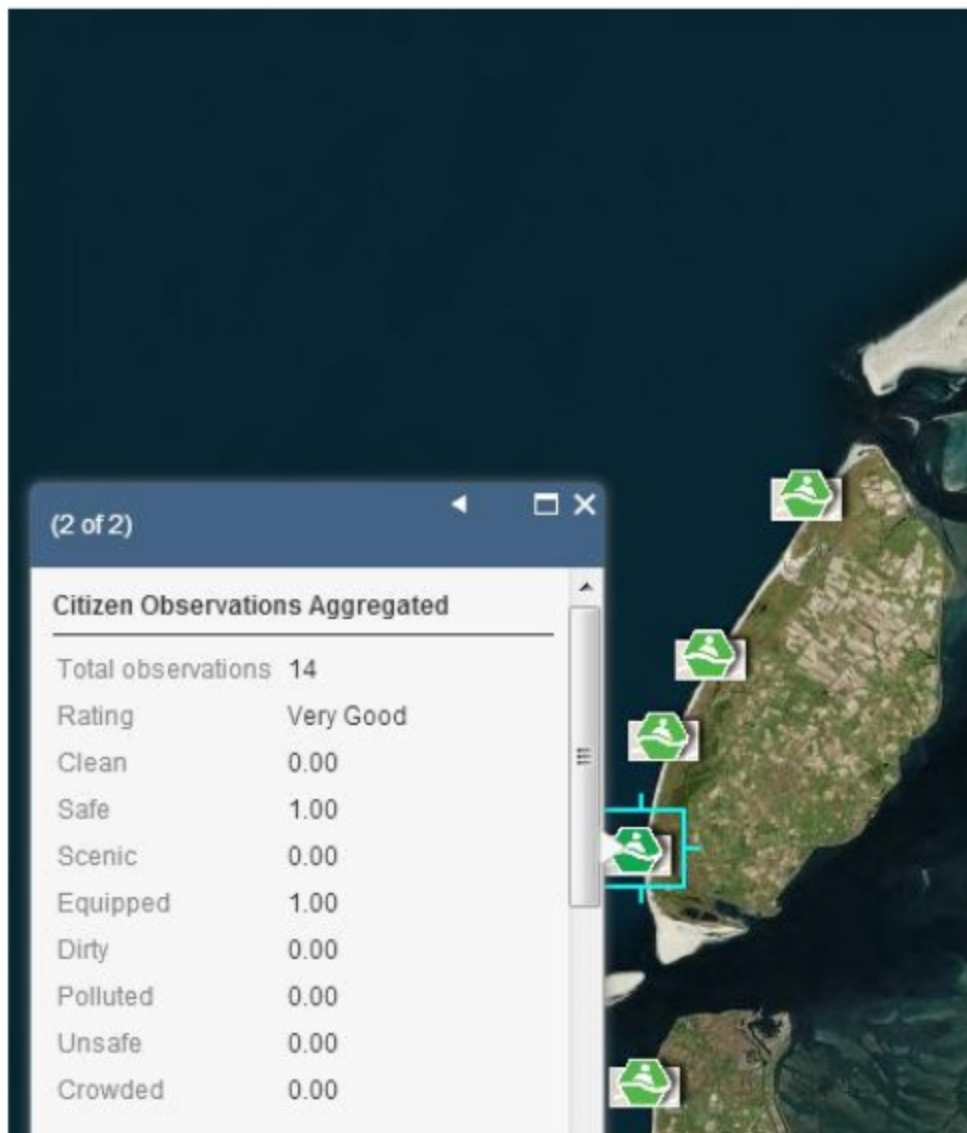
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A B S

Information delivery (WaterWatch)



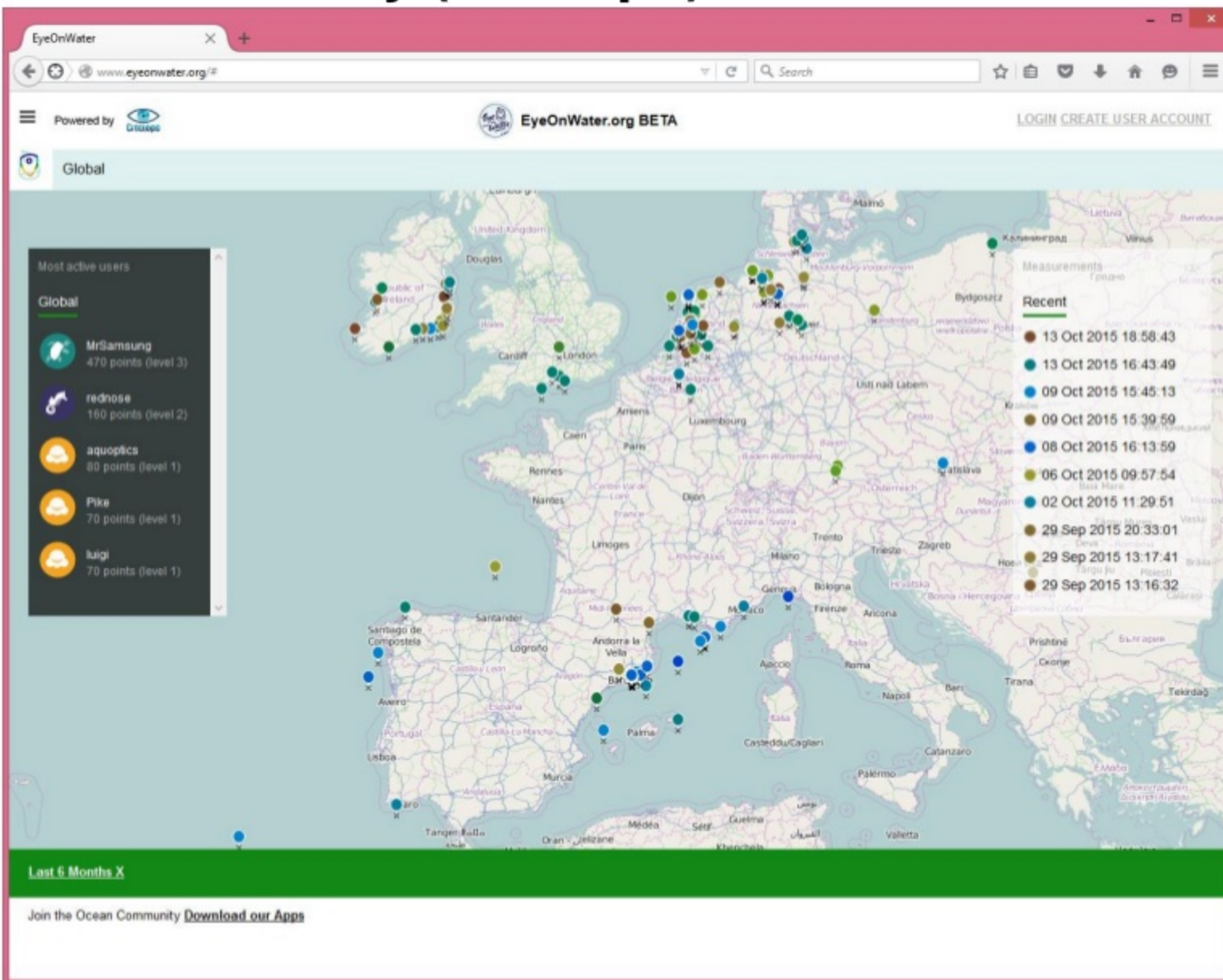
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Information delivery (Citclops)

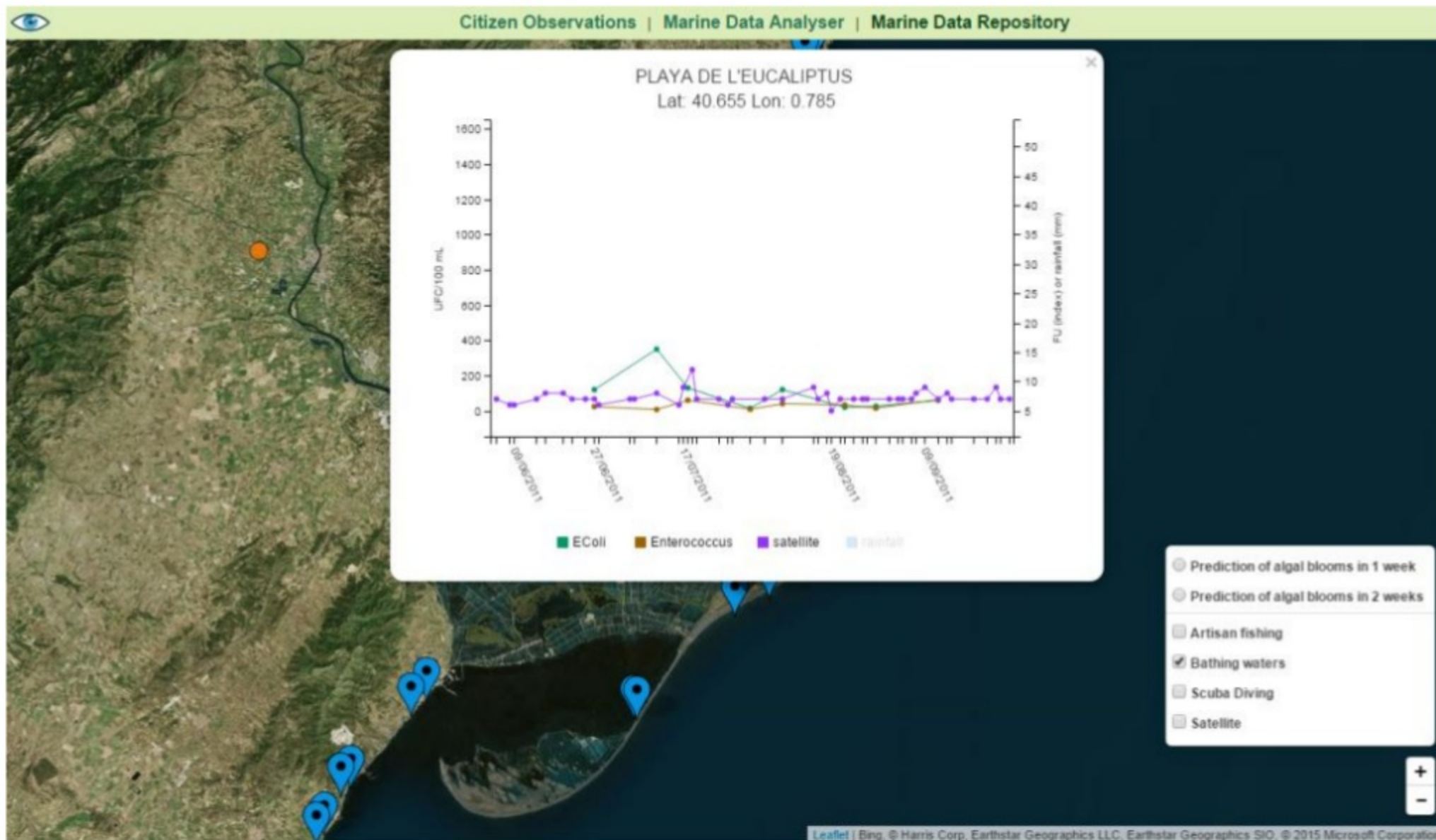


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Information delivery (Citclops)



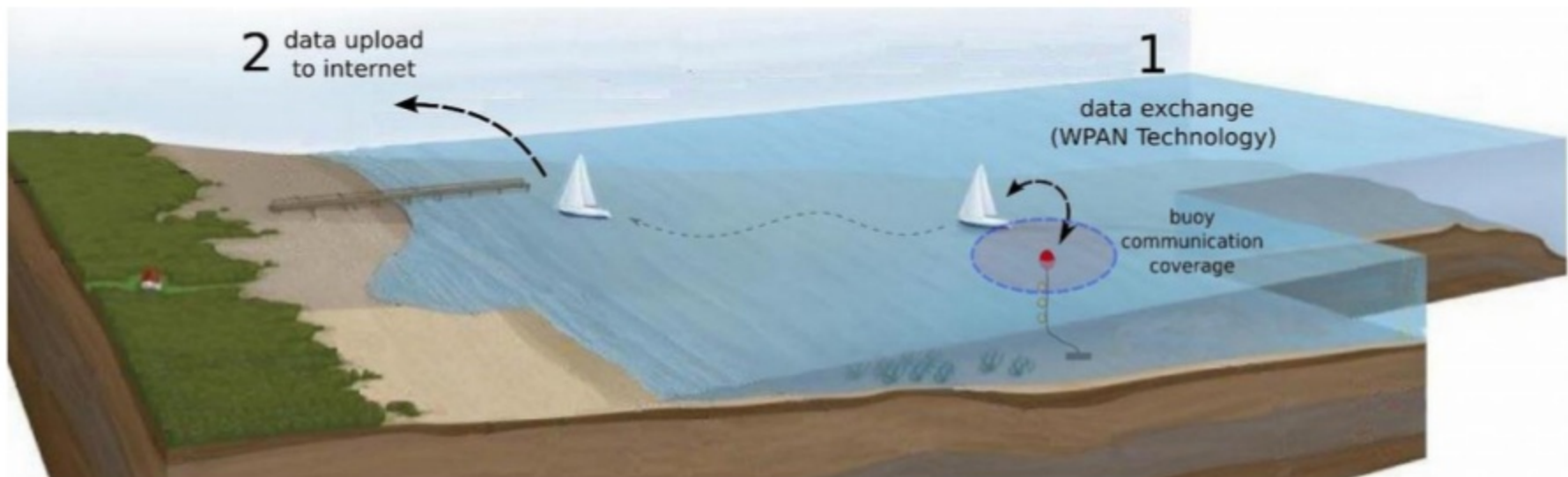
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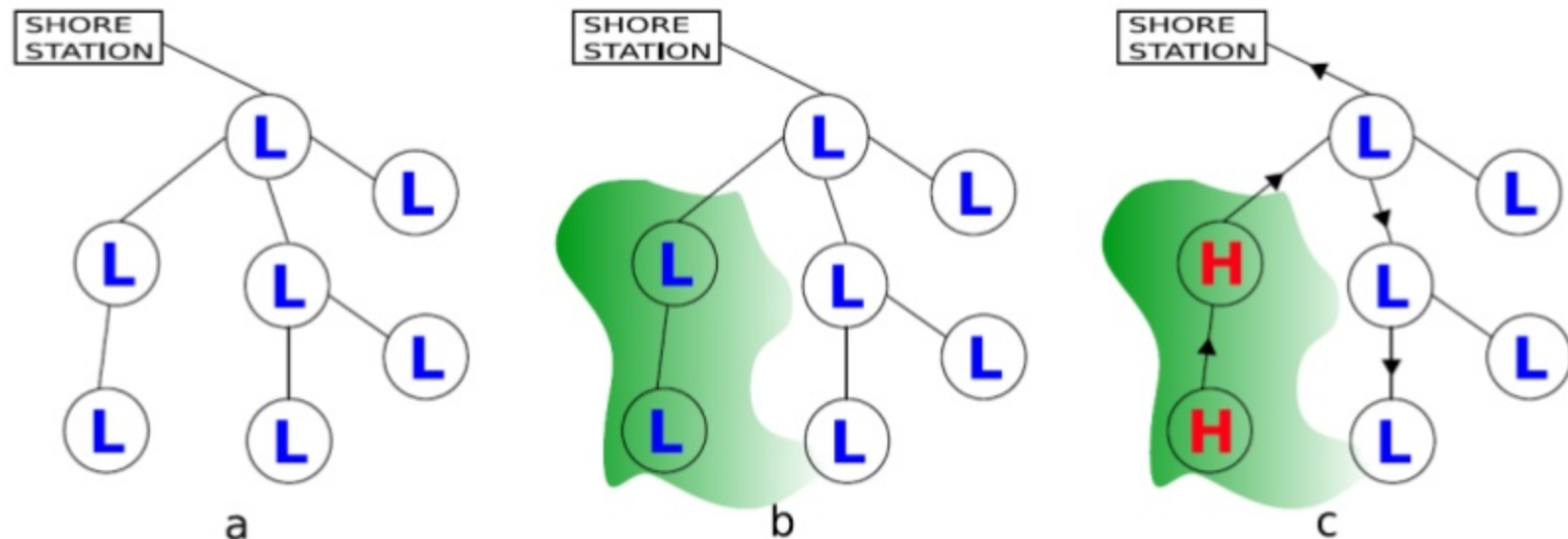
Applications

- Water-color, oil-spill, river-status measurement
- Water transparency via phone pictures and Secchi disc
- Retrieval of sensor measurements from low-cost moorings



Applications

- Improvement of scuba-diving activities
- Best beaches' ranking
- Early-warning systems for HABs and biochemical hazards



European citizen-science projects: other examples

- Andromeda
- Citclops
- CITI-SENSE
- Coastwatch
- COBWEB
- SeaWatchers
- Socientize
- WaterWatch
- WeSenseIt

Coastwatch and Citclops

HOME

CITCLOPS PROJECT COASTWATCH SURVEY

COASTWATCH SURVEY MAP AND BOOKING ALL IRELAND OTHER INFORMATION ▾

NEWS CONTACT

Citclops Project

CITCLOPS Citizen science research anywhere at or on the sea

Coastwatch in TCD is partner in an international EU cofounded research project called Citclops. Other project partners have developed an app to help citizens record and share water colour and transparency as indication of algal blooms. We Coastwatchers across Europe are invited to use it and also to give feedback to help improve it.

Download the Citclops app today – and if not at the sea, try it on your kitchen floor. You are then ready to run when you are at or on the sea! Your observation of sea water colour should be up on the Citclops website map www.citclops.eu (usually within minutes) of you submitting the data with the free app. Please check they are.

If you have Android, click [here](#)

If you have an iPhone click [here](#)

Here is the link for eye on the water: EyeOnWater – Colour by MARIS B.V.

https://appsto.re/us/E_348.I

Here is a link for the tides throughout Ireland: <http://www.tidetime.org/europe/ireland/>

Coastwatch Europe

Informed public participation in protection and management of the coastal zone

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SeaWatchers

seawatchers

HOME PROJECTS MAP DOCUMENTS GALLERY PARTICIPANTS NEWS CONTACT

Collaborate with scientists!
We need your records

ENDANGERED GORGONIANS
We want to know the conservation status of their populations

INVASIVE FISHES
Have you seen this fish?

JELLYFISH ALERT
Are jellyfish blooms more abundant?

MORE PROJECTS
Help with records of crustaceans, sponges, sea birds and pollution

DO YOU LOVE THE SEA?
SIGN UP

OBSERVERS REGISTERED
E-mail:
Password:
SEND Recover password

MAP : LAST RECORDS RECEIVED
Map Satellite Hybrid

NEWS
9/10/2013 Open Days at the Institute of Marine Sciences (CSIC)!
SEE

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COBWEB, CITI-SENSE, WeSenseIt, Omniscientis



How can the Citizens' Observatories Projects contribute to GEOSS?

These projects are particularly good examples on how engage users in the GEOSS and to explore advanced Data Management strategies but they also can contribute to different GEO SBA such:

	Health 		Ecosystem 	Water 	
	Water 		Ecosystem 	Biodiversity 	Water 
	Health 				

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