

Innovative monitoring tools for river and lake water quality, and a new business model for 2020 and beyond

Dr. Laia Llenas Argelaguet



UVIC
UNIVERSITAT DE VIC
UNIVERSITAT CENTRAL
DE CATALUNYA





Does current water quality monitoring fit for the future?

Despite the first cycle of the Water Framework Directive implementation (2009 - 2012), costing at least €120 Billion, many water bodies are still not meeting their environmental objectives. This acts as a barrier to sustainable growth and improving quality of life in many parts of Europe.

Main problems with the current approaches to water quality monitoring:

- Large numbers of samples are needed to provide 'certainty' and precision for reporting,
- Costly sampling and laboratory chemical analysis,
- Data is always historic so doesn't inform real time action,
- There is too much reliance on statutory bodies to do the work and their budgets are being reduced.

As a result of the current approaches to monitoring, the costs are too high, knowledge of diffuse water quality pressures is too low, and community and business engagement is patchy.



INTCATCH 2020 will...

- Deliver water quality outcomes in a more flexible way and increase efficiency.
- Support more targeted, intensive investigation 'monitoring' that identifies and enables managing polluting sources.
- Demonstrate and assess low cost and effective treatment of diffuse pollution.
- Manage and communicate data and outcomes.
- Reduce barriers to stakeholders to take up local monitoring, treatment, and data analysis.
- Harness citizen science capability.



What is INTCATCH about?

Innovation, Demonstration and Market Uptake

INNOVATION

- Innovative sensors
- Autonomous and radio-controlled boats
- Mobile genomics laboratory
- Decision support system
- Cloud based geo referenced data management solutions

DEMONSTRATION

- Lake Garda (Italy)
- Urban rivers in London
- Rural river in Norfolk (UK)
- With stormwater / run-off treatment
- River Ter system in Spain
- Lake Yliki in Greece

MARKET UPTAKE

- Dissemination
- Exploitation
- Training
- Business model
- INTCATCH Expert Network
- INTCATCH Business Franchises
- Full product demonstration (2019)

Transferability in demonstration catchments – Activity leaded by CT BETA

- Demonstrate the versatility and transferability of the INTCATCH 2020 SMART Water Quality monitoring and management system in two European catchments:
 - River Ter (Catalonia, Spain)
 - Lake Yliki (Central Greece RBD Eastern Sterea Ellada)



- Evaluate the benefits of the new INTCATCH system compared to existing ones in real environments.



Development and application of Novel, Integrated Tools for monitoring and managing Catchments

Thank you very much for your attention



www.intcatch.eu

