

NETLAKE COST Action

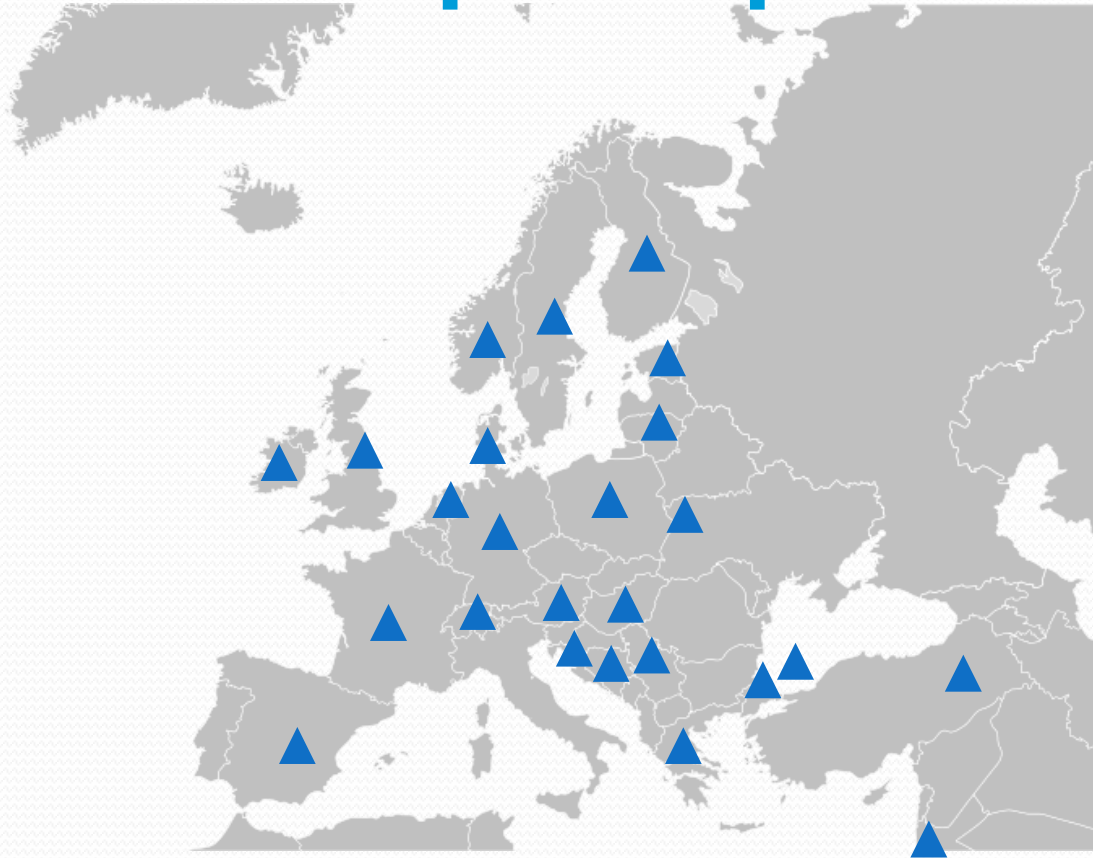


Dr Eleanor Jennings
DkIT

2016 Water JPI Exploratory Workshop,
Dublin – 14th November 2016

NETLAKE - background

Action participants

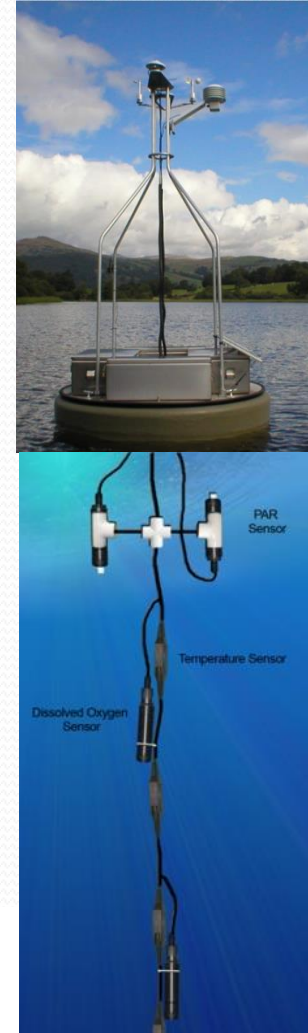
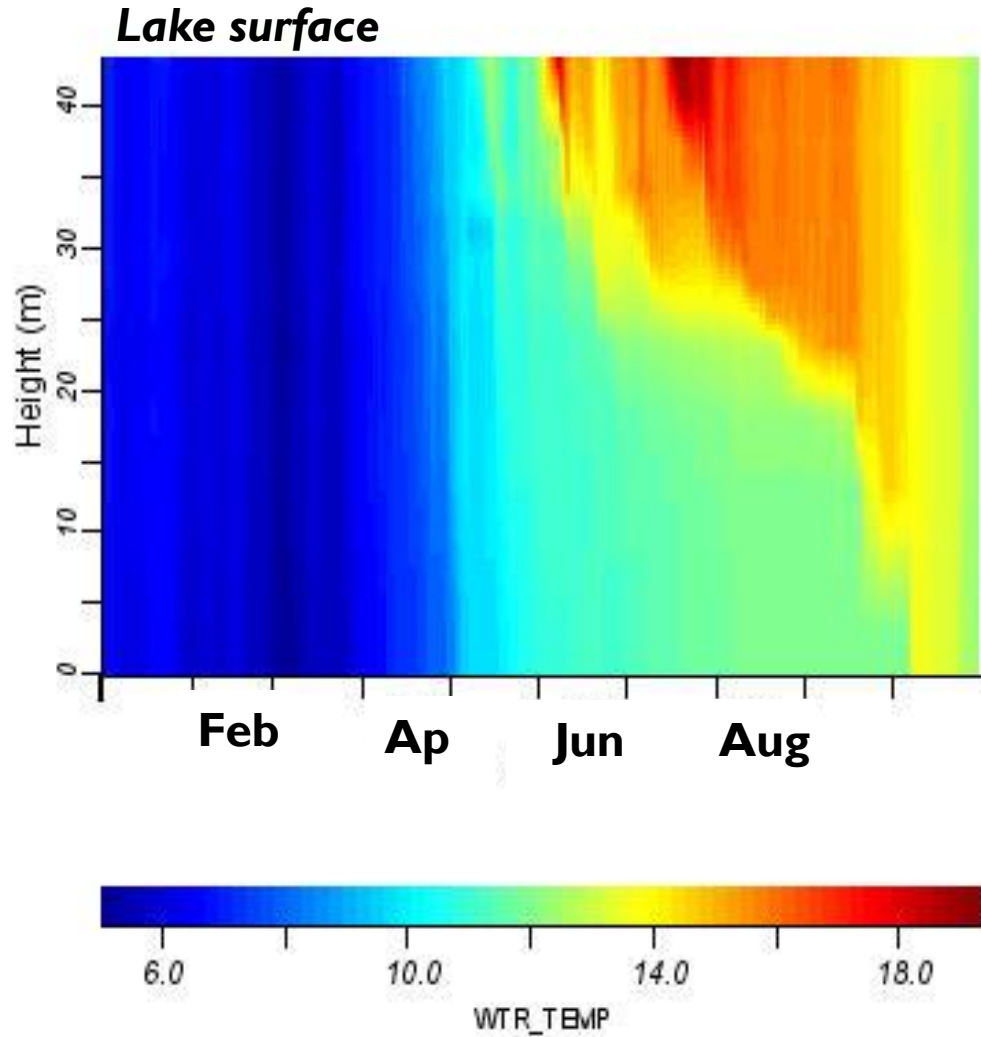


**26 COST countries
(EU)**

**4 non-COST
NZ, USA, Australia,
Albania.**

EU: JRC, Ispra

Lake high frequency monitoring systems

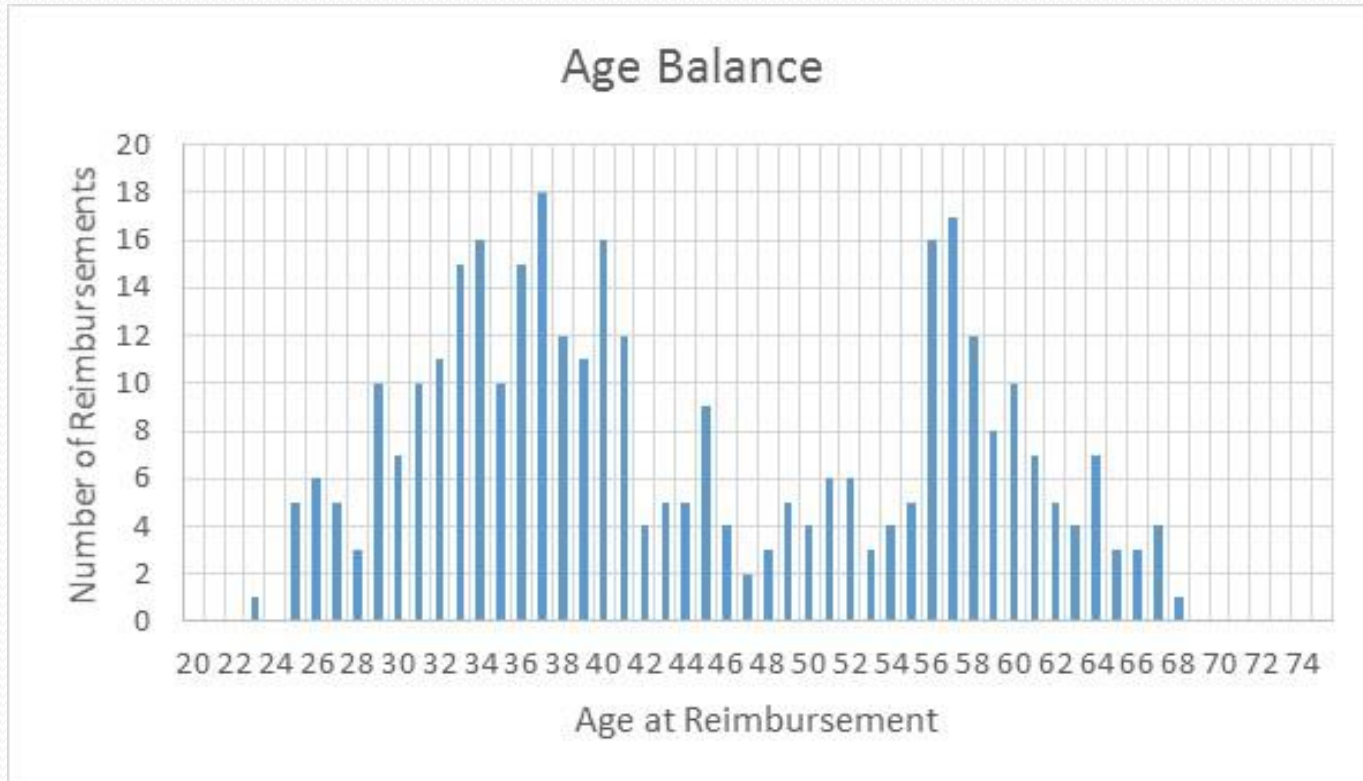




Participation

Early stage researchers +

Life-long learners



NETLAKE: Objectives

The overarching aim of **NETLAKE** is to build a **network of sites and individuals** that will support the development and deployment of sensor-based systems in lakes and reservoirs and promote the use of these systems to address both current and future water quality issues.








Chair: Eleanor Jennings



NETLAKE: Specific objectives

- Establish a forum on the use of lake monitoring stations using in situ sensor technology.
- Provide an assessment of the current use of sensor technology on lakes in Europe.
- Establish a standardised methodology for measurement and data analysis procedures for key parameters.
- Define and address ecological and management relevant questions using the analysis tools developed within the group.
- Utilise the potential of web-based, real time data for involving local groups and schools in lake science.

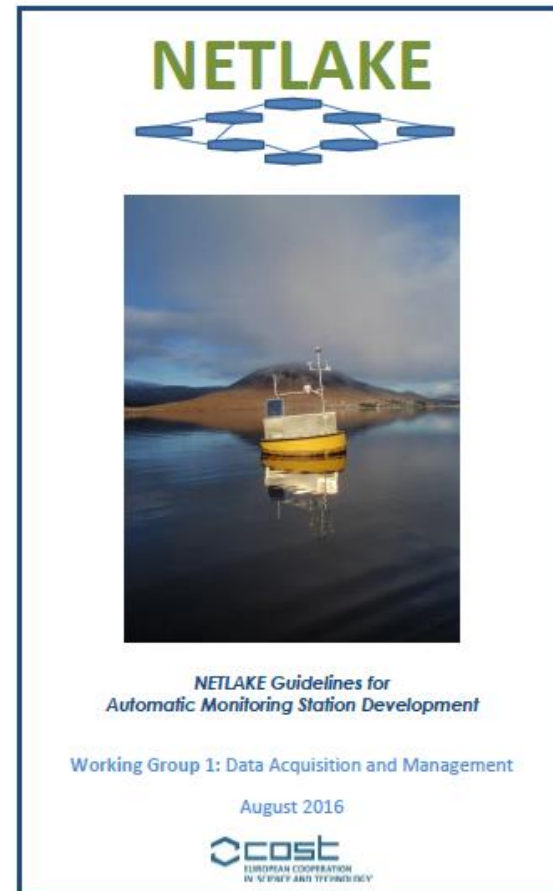
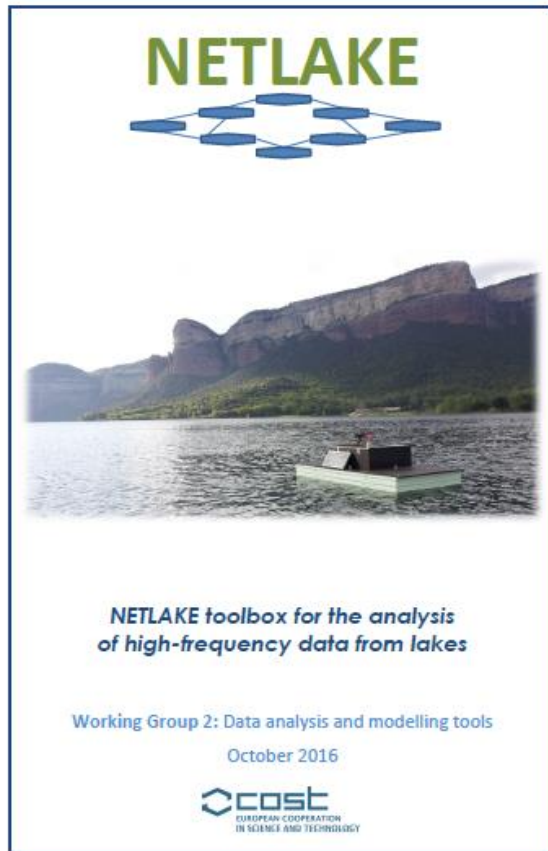
NETLAKE: Objectives

What?	Who?	How?
Meta-database	 <p>Scientists</p>	Action website
SOPs and QA/QC methods	 <p>Water managers</p>	Workshops, Training Schools , Action website, Action symposium
Data analysis tools	 <p>European citizens</p>	Workshops, Training Schools , Action website, publications, Action symposium
Case studies	 <p>Policy makers</p>	Workshops, Action website , Action symposium
Citizen science project	 <p>SMEs</p>	Citizen scientist Training Schools, Network , Action website
Educational materials	 <p>Policy makers</p>	Citizen scientist Training Schools, Network , Action website
Website	 <p>SMEs</p>	www

NETLAKE Outcomes: metadatabase



NETLAKE Outcomes: practical guidance



NETLAKE Outcomes: citizen science



Protocol for participants

1. Take an unused Lipton Green tea (EAN 87 22700 05552 5) and Rooibos tea (EAN 87 22700 18843 8) bag.
2. Find a suitable location (outside your garden)
3. Bury the tea bags slightly apart from each other. The tea has to be approximately 8 cm deep, with the label above the ground.
4. Dig up the bags after 3 months
5. Dry the bags in a warm and/or sunny place
6. Gently tap off the soil on the outside of the bags.
7. Remove what is left of the yellow label but leave the string.
8. Weigh each tea bag separately using scales or the TBI flyer.
9. Fill in the [dataform](#) on the site containing your name, email address, weight of the bags and burial location. We will give you your TBI as soon as possible.



NETLAKE Outcomes: critical review

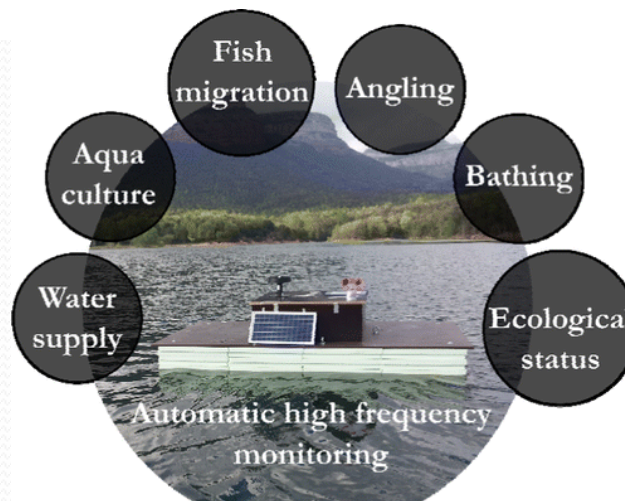
ENVIRONMENTAL
Science & Technology

Critical Review

pubs.acs.org/est

Automatic High Frequency Monitoring for Improved Lake and Reservoir Management

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Synergies with the Water JPI Theme 5

Enabling Sustainable Management of Water Resources

- Now have overview of current use of HFM of lakes and reservoirs in Europe through survey, metadata base and Marce et al. paper.
- HFM used for drinking water assessment, quality at recreational beaches, fisheries management as well as research
- Built a community of scientists with strong links to each other, to managers, to citizens.
- Undertook an assessment of cyanobacterial blooms at <300 lakes across Europe (NETLAKE and CyanoCOST Actions)
- Gained insights into working with citizens to monitor water quality

Key Knowledge Gaps

- Need for applied research on HFM – most data used for basic research
- Added value of data that are being collected for management – the syndrome of the gigabyte (Marce et al. 2016)
- Useful to have data archives similar to common met data archives.
- Assessment of use to citizens to inform water management – social science/science aspects: can this provide useful information **as well** as raising awareness?
- Possibility exist to harness network of scientists for snapshot assessments as in European Multi-Lake Survey

Project – Contact Details

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and to Action participants