

WATERWORKS 2017 RDI FUNDED PROJECTS BOOKLET

Title of the project:

Supporting tools for the integrated management of drinking water reservoirs contaminated by Cyanobacteria and cyanotoxins

Outcomes and expected impact:

New methods for improved drinking water quality production. The technologies, tools and strategies developed during the project will contribute to spread of safely managed drinking water services for all (SDG6), improved integrated water management (SDG6) and strengthen resilience to climate related-hazards like algal blooms (SDG13). The project will also impact on SDG1, SDG3, SDG9, SDG17 (social benefits). Innovation and development of tailored monitoring and predictions tools, and treatment solutions for algal bloom waters. Development of new partnerships with SME.

List of deliverables expected:

WP1. Scientific report on monitoring system results of the study areas; Database structure and development

WP2. Manuscript to be submitted for publication comparing the simulations of cyanoHAB blooms using mechanistic models and machine learning methods; Manuscript to be submitted for publication describing the BOOWATER cyanoHAB forecasting system.

WP3. Scientific report on lab tests results and provisional operative parameters to design the demonstrative pilot; Scientific report on long-term validation and process optimization in real environment to enhance adsorption and removal of toxic cyanobacteria compounds;

WP4. A social mapping of the relevant stakeholders and the role (M8)^{SEP}; Database structure built up;^{SEP} Database filled up with data collected integrated with relevant data at basin level and linkage with other db; DSS design and development;

Contact person(s) for Communication activities (name and e-mail)

Federica Colucci, federica.colucci@enea.it

Contact person(s) for Dissemination activities (for open data & open access activities, name and e-mail)

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Expected research results to communicate and disseminate (in very general terms)	Target groups for communication and dissemination activities:
<p>1. <i>Development of a local monitoring network to alert the water control laboratory that will be able to verify the toxicity of algal bloom in the field.</i></p>	<p><i>Associations of the mayors; Service companies that manage the water network SME</i></p>
<p>2. <i>Using commercial systems/items such as cyanowatch, multi-parameter sensors, drones and software, contributes to reduce the network management costs and to optimize the performances of drinking water treatment plants;</i> ^[17] _[SEP]</p>	<p><i>Public Water Supply Systems SME</i></p>
<p>3. <i>Developing effective treatment solutions to strengthen resilience and adaptive capacity to climate-related hazards</i></p>	<p><i>Public Water Supply Systems Service companies</i></p>
<p>Experiments / Case studies (if any): location, type of experiments: Lake Erken and Mälaren in Sweden and Albano and Castreccioni-Cingoli Lakes in Italy are pilot areas selected, where the BLOOWATER monitoring system will be tested under real conditions of application.</p>	
<p>Water Policy context / project contribution to policies (National, European, International – UN SDGs): The project will also impact on SDG1, SDG3, SDG 6,SDG9, SDG17</p>	
<p>Funder of the project: Institutions: Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR); Swedish Research Council Formas (FORMAS); Research Council of Norway (RCN) Country: ITALY SWEDEN NORWAY</p>	