

Upgrade of EYDAP's water quality control with the use of robotic boats

Marina Despotidou, Nikos Tsalas, Alekos Dosis, Georgios Katsouras, Stylianos Samios, Efthymios Lytras and Kostas Papadopoulos

Athens Water and Sewerage Company S.A (E.Y.D.A.P.) – Research and Development
– Oropou 156, 11146, Galatsi, Athens, Greece, e-mail: mades@eydap.gr

The Research and Development Department of EYDAP (R&D), as a result of participation in the INTCATCH project, is responsible for the operation of two autonomous robotic boats. The autonomous boats applied in 2020 in all four Reservoirs of EYDAP (Yliki, Marathon, Mornos and Evinos) and with their integrated sensors (chl-a, dissolved oxygen, conductivity, pH, temperature, total nitrogen and phosphorus) collected more than 290,000 data along the perimeter of the Reservoirs covering more than 90 kilometers. The data evaluated in real time in the field and in the office (via tablet, mobile and PC), through appropriate applications, providing at the same time a safer working environment against COVID-19.

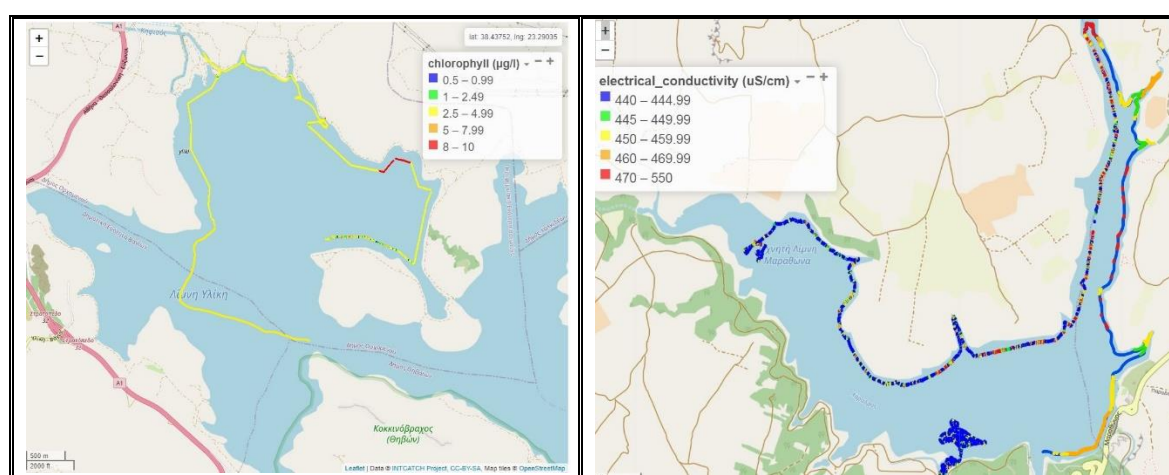


Figure 1: Chl-a in Lake Yliki (left) and Conductivity in Marathon (right), 2020

By using the continuous monitoring system, potential sources and pathways of pollution could be identified and the results provided EYDAP with the opportunity to have a more comprehensive picture of the quality of the catchment in real time and take immediate countermeasures if necessary. The possible effect from anthropogenous pollution can be thoroughly investigated with the use of the robotic boats. Additionally, the systematic, full scale application of autonomous boats in the future can collaboratively complete the current monitoring program of a catchment, greatly reducing the cost. It achieved a more thorough monitoring strategy both in space and time and optimized solutions for monitoring of water bodies. The Vision is that EYDAP will operate a service for people interested in assessing water quality in relation to catchment management and the traditional spot sampling protocols.

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