

Water Information System - Earth Observations



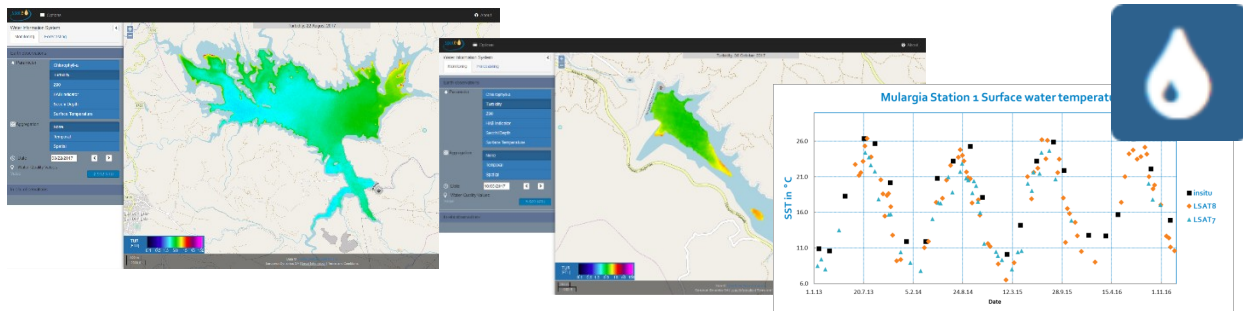
Earth Observation (EO) water monitoring provides a comprehensive range of water quality parameters in high spatial and temporal resolution for two reservoirs, Aposelemis (Greece) and Mulargia (Italy) to support environmental impact assessments and decision making.

Applications

- Environmental impact assessment with baseline monitoring and identification of trends.
- Enabling proactive informed decision making by increasing the responsiveness level of water managers against possible short to medium term changes such as increased turbidity or algae blooms.
- Better understanding of sediment transport in waterways through EO. This information is essential to reduce reservoir and river engineering expenses e.g. for dredging.

Benefits

- Cost effective monitoring of important water quality parameter for environmental assessments.
- Harmonized data sets with global coverage.
- Sensor independent processing enabling multiple records per day by integration of several satellite systems.
- Very high spatial resolution monitoring.
- Selecting different time periods dating back over last three decades.
- Fast delivery mechanisms.
- Independent of in situ measures.



Product Overview

The Earth Observation monitoring feature in the Water Information System operationally delivers several satellite based measurements per week, covering the water quality parameters chlorophyll-a, turbidity, Z90, secchi depth, harmful algae bloom indicator and water surface temperature. Satellite data is processed using sensor independent and state-of-the-art physics-based Modular Inversion and Processing System (MIP) developed by EOMAP. Different satellite sensors (Sentinel-2 A/B and Landsat 8) are included in the calculation. These calculations are supported by automated quality control mechanisms taking into account influences of sun and sensor geometries, sunglint effects, atmospheric conditions and cloud shadows. New product developments within SPACE-O will further expand the product portfolio by e.g. evaporation rate or trophic state indices.

Space Assisted Water Quality
Forecasting Platform for
Optimized Decision Making in
Water Supply Services



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The SPACE-O Consortium



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