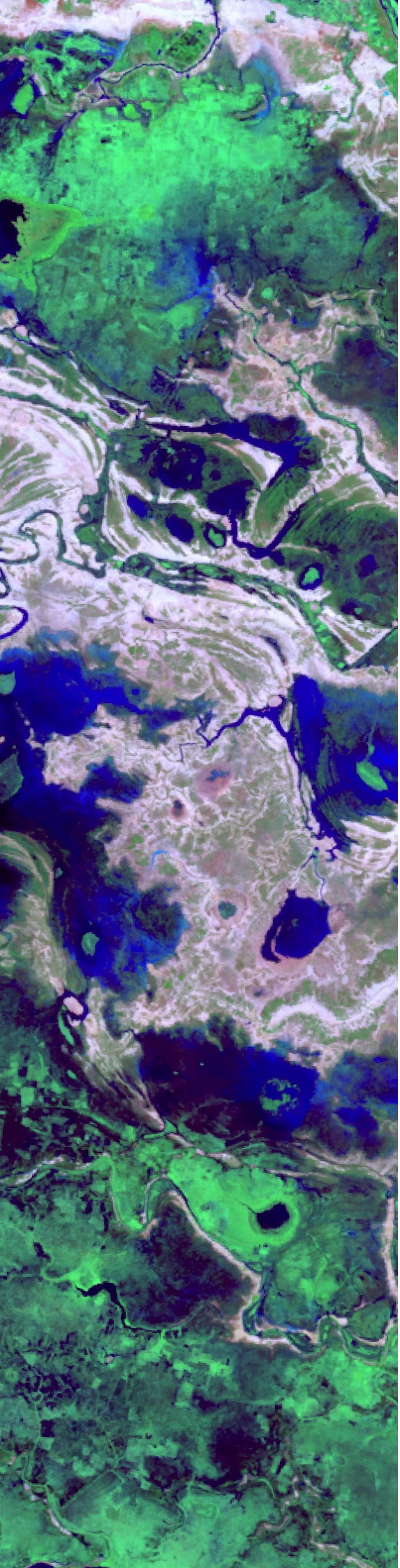

Satellite-based Wetland Observation Service (SWOS)

In spite of being hotspots of biodiversity and providing precious ecosystem services, wetlands are one of the fastest declining ecosystems worldwide. Information on their locations, their delineations, their ecological character and their services is often sparse and difficult to find or access. The result is a limited coverage of wetlands in policies and management practices.

PROJECT OBJECTIVES

SWOS is a Horizon-2020 project funded by the European Commission.
Its main objective is to assist wetland practitioners (managers, policy-makers, scientists) with wetland monitoring tools, based on Earth Observation (EO) data. The project aims to:

- Use the new possibilities offered by free satellite data (including Sentinel satellites) to generate mapping products and indicators which will be applicable globally and demonstrated for a range of 50 selected wetlands in Europe, Africa and the Near-East.
- Further develop existing approaches to allow dynamic monitoring of wetland condition and changes (and their drivers) on large spatial and temporal scales.
- Integrate satellite data, mapping products and in-situ datasets into a free access Geo-Portal, connected with other web-based portals for environmental monitoring. Via this Geo-Portal, SWOS provides a unique entry point to easily locate, access, process and connect EO data related to wetlands.

ACTIONS

- Delivering mapping products and indicators derived from EO data.
- Promoting and improving the integration of wetlands across policies in different sectors.
- Contributing to the development of a Global Wetland Observation System with the aim of supporting the monitoring of Sustainable Development Goals (SDGs) for both water and biodiversity.
- Informing the development of wetland conservation and restoration measures with a focus on maintaining biodiversity and ecosystem services.
- Organizing several training workshops during the project lifetime, for the benefit of all involved user organizations working for wetland conservation and management at different scales (global, regional, national and local), in order to better transfer the developed wetland monitoring tools and products.

PROJECT OUTPUTS

- **Wetlands Inventory and Delineation**

Identification and delineation of Potential Wetland Areas (PWA) in support of national and local wetland inventories.

- **Water Quality Monitoring**

Monitoring intra- and inter-annual trends of aquatic pollution and disturbances within large water bodies.

- **Land Use/Land Cover Mapping and Changes**

Mapping habitats and assessment of long-term (up to 40 years) and short-term (within a year/season) changes and trend analyses in and around wetland sites.

- **Surface Water Dynamics**

Analysis of the intra- and inter-annual variations of open surface water.

- **Surface Temperature Change**

Assess long- and short-term changes in and around wetlands, based on surface temperature variations.

- **Soil Moisture:**

Develop a relative soil moisture index for wetland delineation.

- **Monitoring Indicators**

Derive indicators from the produced maps for the monitoring of status and trends of the selected wetlands.

- **The Software**

All workflows used for maps and indicators production will be integrated into the SWOS software.

- **The Geo-Portal**

All maps and indicators, in addition to other relevant data, will be integrated in the new SWOS Geo-Portal (bit.ly/SWOS_GeoPortal).

Duration: 2015 - 2018

More information: www.swos-service.eu/

Budget: ~ 5M €

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This work was carried out by MedWet as part of the portfolio of Mediterranean wetland projects.

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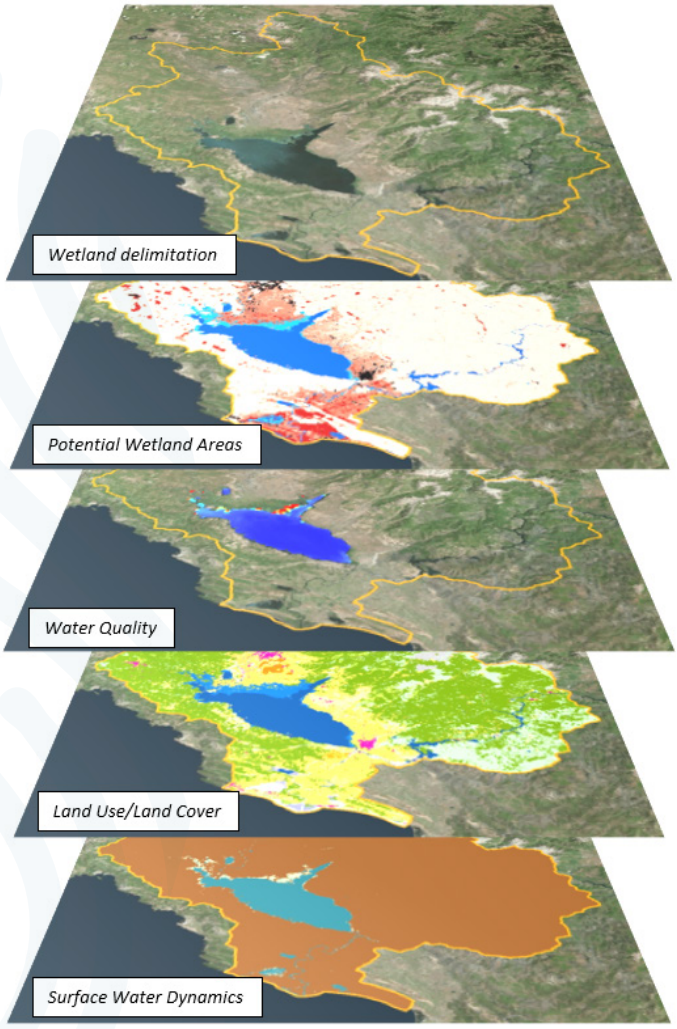
SWOS from user for users

In order to ensure that the final service is user-friendly, all the user organisations are vital throughout the project. Thus, user requirements were gathered at the beginning of the project and translated into system requirements, taking into account different policy frameworks at global, regional and national scales.



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PARTNERS

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