

April 2022



## INFORMING WATER RESOURCE MANAGERS IN SARDINIA

### >>> A few years later

In the past few years, building upon the results obtained during SPACE-O project, a greater awareness of the potential on the use of Copernicus data was encountered at decision making level. Such approach allowed to consider different risk scenarios regarding water reservoirs in Sardinia.

*Maria Antonietta Dessena, Regional Water Authority of Sardinia region*



BENEFICIARIES	International Water Association (IWA), UK	Regional Water Authority of Sardinia region (Ente acque della Sardegna - ENAS)	Local and Regional Water managers	Society and Citizens
SERVICES	<b>TIER 1: SERVICE PROVIDER</b> Sentinel-2	<b>TIER 2 PRIMARY USER</b> Indicators for water quality and quantity such as Chlorophyll-a, turbidity and harmful algae blooms; Water surface temperature and evaporation; Floating materials (e.g. oil or scum)	<b>TIER 3 SECONDARY USER</b> Decision Support IT tool with modules on: Environmental/water information system, supporting reservoir management; Early warning system on threats to the water sources; Water treatment plant optimisation.	<b>TIER 4 END USER BENEFICIARIES</b> Overall improved water quality; More informed and sustainable water resources governance; Optimized water services supply

Value chain definition following SeBS Methodology - <https://earsc.org/sebs>

### The space-based solution

This Copernicus-based solution was produced by a scientific entity for a Public Administration.

### The Usage Maturity Level

In the past few years, the solution has consolidated at UML 3 due to an increased awareness about Copernicus programme at decision-making level.

Thematic Area



CLIMATE, WATER AND ENERGY

Region of Application



SARDINIA

Sentinel mission used



S2

Copernicus Service used



-

Usage Maturity Level



3

## Overall benefits

### ECONOMIC



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### INNOVATION



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### ENVIRONMENTAL



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### SCIENCE



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### REGULATORY



No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

### SOCIETAL

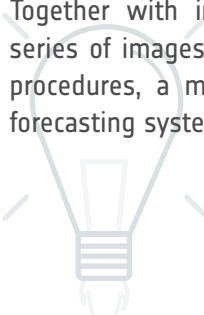


No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

Benefits classification following SeBS Methodology - <https://ears.org/sebs>

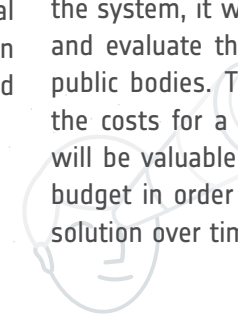
## Interesting facts...

For a more informed water management in Sardinia, some alternative mitigation solutions have been proposed. Together with information on the use of multi-temporal series of images and in-situ data and on data assimilation procedures, a medium and short-term early warning and forecasting system was provided online.



## Outlook to the future

The Space-0 project had already given interesting and very credible results. In the future, during the testing phase of the system, it will be possible to verify the results obtained and evaluate the level of possible customization for single public bodies. The next steps will hence allow to evaluate the costs for a fully operational solution. Such information will be valuable input to the Public Administration expense budget in order to ensure the functioning of an operational solution over time.



## Acknowledgements

SPACE-0 project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 730005.

## Contacts

**Maria Antonietta Dessena** |  
mantonietta.dessena@enas.sardegna.it

## ABOUT COPERNICUS4REGIONS

The views expressed in the Copernicus User Stories are those of the Authors and can in no way be taken to reflect the official opinion of the European Space Agency or of the European Commission. Funded by the European Union, in collaboration with NEREUS. Paging, printing and distribution funded by the European Space Agency. IPR Provisions apply. Copernicus4Regions material may be used exclusively for non commercial purposes and provided that suitable acknowledgment is given.

Find the original story at  
[www.nereus-regions.eu/copernicus4regions/user-stories-sheets](http://www.nereus-regions.eu/copernicus4regions/user-stories-sheets)  
or Download the full publication  
[www.nereus-regions.eu/copernicus4regions/publication](http://www.nereus-regions.eu/copernicus4regions/publication)

[www.copernicus.eu](http://www.copernicus.eu)  
<https://sentinels.copernicus.eu>