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MAKING SEAGRASSES GREAT AGAIN

A few years later

Since 2018, a purely cloud-native seagrass remote sensing system was developed in the Google Earth Engine. Such a tool allows to perform spatio-temporal scaling and to monitor the seagrass health, extent, and carbon, globally. This system is already being employed to map seagrasses in Climate Change and Biodiversity projects, assisting governments and policymakers to strengthen Multilateral Environmental Agreements.

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	TIER 1: SERVICE PROVIDER	TIER 2 PRIMARY USER	TIER 3 SECONDARY USER	TIER 4 END USER BENEFICIARIES
BENEFICIARIES	German Aerospace Center – DLR; Foundation for Research and Technology, Hellas - FORTH	Samaria National Park	Park managers	Citizens and Society
SERVICES	Sentinel-2	Monitor of seagrass health and extent; Biophysical parameters, including carbon sequestration of seagrasses	Maps of Posidonia oceanica seagrass beds	Better management and conservation in a time- and cost-efficient manner; Biodiversity conservation

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. In the last few years, there were significant performance and automation improvements.

The Usage Maturity Level

The solution remained more or less at the same UML. The reason for this is found in the fact that the necessary administrative process is still to be finalized.

Thematic Area: BIODIVERSITY AND ENVIRONMENTAL PROTECTION

Region of Application: SAMARIA NATIONAL PARK, CRETE

Sentinel mission used: S2

Copernicus Service used: –

Usage Maturity Level: 1

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://earsc.org/sebs

Interesting facts...

This Earth Observation monitoring system has been improved: it is now purely developed and it is running within a cloud. A new plethora of multi-tier mapping products and technological components have been developed which have increased the automation, accuracy and amount of information produced by our Copernicus-based solution.

Outlook to the future

Within the next three years, Service Providers aim to commercialize this cloud-native seagrass remote sensing system and to accurately map not only the carbon and biodiversity of seagrasses, but the full suite of coastal ecosystems, including mangroves, corals, and kelps. This action will foster the maturity of the proposed solution to a global and scalable decision support system to enable more effective coastal and marine protection.

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