April 2022

OPERATIONAL AFFORESTATION MONITORING

A few years later

In the last few years, the application has been presented to specialist users such as forest administrations of the federal states. The solution is operational and integrated with the workflow of the administration.

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	TIER 1: SERVICE PROVIDER	TIER 2 PRIMARY USER	TIER 3 SECONDARY USER	TIER 4 END USER BENEFICIARIES
BENEFICIARIES	Forestry Research and Competence Centre Gotha part of the ThüringenForst - Institute under Public Law	ThüringenForst - Institute under Public Law; Forest administration of the Free State of Thuringia	Local forestry officers; Forest administration; Municipalities; Private forest owners	Citizens and society
SERVICES	Sentinel-2 Copernicus Land Monitoring Service (in combination with auxiliary data, such as LIDAR)	Copernicus High Resolution Layers (HRLs) Forests i.e. Tree Cover Density and Forest Type	Accurate forest afforestation map and additional work card (listing all potential afforested areas)	Improved monitoring of areas in the "forests" category

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

The space-based solution

This Copernicus-based solution was developed by the Public Administration for its internal use. From technical advancement perspective, by linking Sentinel-2 data and LiDAR data, significant improvements have been achieved. For example, the solution is now more accurate and reliable.

The Usage Maturity Level

The solution has been consolidated at UML 5 and is now integrated in the workflow of the administration.

Thematic Area: AGRICULTURE, FOOD, FORESTRY AND FISHERIES

Region of Application

Sentinel mission used: S2

Copernicus Service used: CLMS

Usage Maturity Level: 5

Overall benefits

ECONOMIC

- Cost savings of operating expenditure have been registered
- Efficiency gains have been registered.

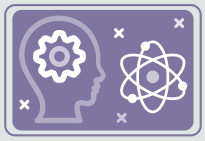
INNOVATION

The solution has helped to introduce some innovation in the functioning of the public administration (e.g. adopted more efficient or effective business practice)

ENVIRONMENTAL

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

SCIENCE



- There was an increase in technical/scientific expertise related to Copernicus/EO within the PA
- There was an increase in technical/scientific expertise related to Copernicus/EO at the service provider

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 solution for operational afforestation monitoring increased recognition about the effectiveness of the solution at decision-making level based on the achieved results and return-of-experience.

Outlook to the future

The topic of climate change is currently in the focal point. To tackle these challenges, more detailed information about the tree species composition and the recording of changes in the forest areas will be needed (information such as damages, deforestation, changes in forest ecosystem).

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