

April 2022



## AGRICULTURE CAP SUBSIDIES CONTROL

### >>> A few years later

“In the past few years, the development of SAGRIS (Sentinels-based AGRiculture Information Service Component) production work-flows and CAPCON (CAP control) information service has continued. These actions were supported by the national ESA PECS program during 2019-2020. Service development was actively supported by our partners at iTree Lietuva company and the National Paying Agency (NPA) of Lithuania.

*Gediminas Vaitkus, Geomatrix UAB*



BENEFICIARIES	Geomatrix UAB	Lithuanian National Paying Agency (NPA)	Lithuanian National Paying Agency (NPA); Farmers	Citizens and society
SERVICES	<b>TIER 1: SERVICE PROVIDER</b> Sentinel-1 Sentinel-2	<b>TIER 2 PRIMARY USER</b> CAPCON Service based on two elements: separation of arable land from grassland to confirm the arable land status; operational monitoring of farming activities on grassland to detect grass mowing periods (livestock grazing)	<b>TIER 3 SECONDARY USER</b> An automated detection of parcels possibly not complying with their declarations	<b>TIER 4 END USER BENEFICIARIES</b> A more sustainable use of agricultural lands; An improved preservation of grassland

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

### The space-based solution

This Copernicus-based solution was produced by a commercial company for a Public Administration. Since 2018, there were significant performance/automation improvements in the solution.

### The Usage Maturity Level

In the past few years the solution has transitioned to a higher UML. More specifically, the main reason for this transition is that new space-funds were allocated to uptake the space-based solutions into territorial practices.

Thematic Area



AGRICULTURE, FOOD, FORESTRY AND FISHERIES

Region of Application



LITHUANIA

Sentinel mission used



S1  
S2

Copernicus Service used



-

Usage Maturity Level



5

## Overall benefits

### ECONOMIC



- Efficiency gains have been registered
- Reduction of risk has been registered
- The replicability of the solution was achieved

### ENVIRONMENTAL



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

### REGULATORY



- There were improvements in the policy monitoring capabilities of the PA in charge
- The solution has facilitated or improved the compilation of institutional reports by the PA
- The solution has improved the PA's capabilities to detect and assess non compliances
- The solution improved compliance promotion with duty-holders
- The solution allowed to improve accountability of duty holders and/or regulators

### INNOVATION



- The solution has helped to introduce some innovation in the functioning of the public administration
- There were positive market externalities

### SCIENCE



- The solution has helped to improve understanding about a specific topic of interest traditionally not related to Earth Observation (EO)
- The solution has enabled some technological advancement
- 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
- There was an increase in the research budget share of the institutions involved in the solution

### SOCIETAL



- Improved coordination and governance has been registered
- Strategic added value was registered for the involved actors

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

## Interesting facts...

In 2020 CAPCON pilot testing service reached 95% accuracy level for 23 crop detection and farming algorithms, based on advanced machine learning solutions. Service validation (2019-21) was done by NPA. After successful implementation of ESA PECS project, CAPCON service became operational with TRL9 and is now delivered in Lithuania under commercial service contract since 2021. The service is used by the NPA as a replacement of manual on-site checks since 2019. The solution is now ready for a scale-up in the entire Baltic Sea region.

## Outlook to the future

For the future, an expansion of commercial CAPCON service for the Baltic Sea region and northern Europe (e.g. Latvia, Estonia, Poland, Germany, Denmark, Sweden, Ireland) is foreseen.

Development of COSFARM smart farming service, based on SAGRIS platform and integrated with CAPCON, is also in the plans of the service provider.

## Contacts

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