



# CALLISTO

BRIDGING THE GAP  
BETWEEN COPERNICUS DATA  
PROVIDERS AND END USERS THROUGH  
ARTIFICIAL INTELLIGENCE SOLUTIONS

PILOT USE CASES BROCHURE

LAND BORDER CHANGE DETECTION



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# PILOT USE CASES

## SATELLITE JOURNALISM

- Germany
- Poland

PRESS

## LAND BORDER CHANGE DETECTION

- European borders
- Spain-Morocco | Croatia-Bosnia and Herzegovina
- Greece-North Macedonia | Hungary-Serbia



## CAP MONITORING

- Greece
- Cyprus



## WATER QUALITY ASSESSMENT

- Belgium
- Italy

# LAND BORDER CHANGE DETECTION

-  **PUC locations**  
European borders
-  **End users**  
Image Analysts  
Law Enforcement Agencies

-  **Technological assets used**  
Satellite Imagery (Sentinel 2A - Multi-spectral), UAV (N-IR)
-  **Partners responsible**  
European Union Satellite Centre (SatCen)

## CHALLENGE

Changes in land borders impose corresponding changes in their permeability and consequently, the construction of preventive operational measures (e.g., fences, walls, etc.) may be needed in order to ensure border security.

## MAIN GOAL

This PUC aims to support the operational work of image analysts at SatCen working on border surveillance tasks. In particular, the CALLISTO platform will be able to process Sentinel data, perform accurate land change detection to infer relevant changes at borders and deliver notifications to the analysts.

## EXPECTED IMPACT

This PUC will provide a Sentinel-powered Land Border Observatory prototype, delivering notifications for further processing and analysis from imagery analysts, and improve aspects of detecting accurately relevant land changes at EU borders.

## INNOVATIVE SOLUTIONS

Rasterised relevant change detection probability layers at EU external borders based on EO data

Relevant land change detection notifications delivered to the user as new "events" are detected

Generation and proposal of a flight plan for future UAV missions

### Contact

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