White Paper

National Observatory of Athens

GRASSLAND MOWING EVENTS DETECTION

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Revolutionize your grassland management with our advanced Grassland Mowing Events Detection service. This cutting-edge Earth observation change detection module combines satellite data from Sentinel-1 and Sentinel-2 with Deep Learning algorithms to monitor grassland activity using artificially refined vegetation indices at the pixel level. With our service, you can accurately track the dates of mowing events and optimize your operations for maximum productivity and profitability.

Experience the power of technology and take your grassland management to the next level with our sophisticated solution.

KEY FEATURES:

Accurate Reconstruction of NDVI

The service is able to reconstruct the Normalized Difference Vegetation Index (NDVI) based on data from Sentinel-1 satellite, which provides a solution to the challenge of cloud coverage that may obscure data from other satellite sources.

Mowing Events Identification

The service uses the newly created NDVI to identify mowing events in grassland vegetation. This provides an efficient and reliable way of tracking mowing activities that can have significant impacts on the productivity and sustainability of agricultural operations.

Compliance with National Regulations

The results derived from the service can be used to evaluate compliance with national regulations for mowing activities, ensuring that agricultural practices meet legal requirements and environmental standards. This helps to promote sustainable agriculture and support the growth and development of the agricultural sector.

The ENVISION project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 869366.

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PAS ADVANTAGES WITH GRASSLAND MOWING EVENTS DETECTION:

Scalability

Our service can be used to monitor mowing events in grasslands at any scale, from small areas to entire countries.

Constant Direction

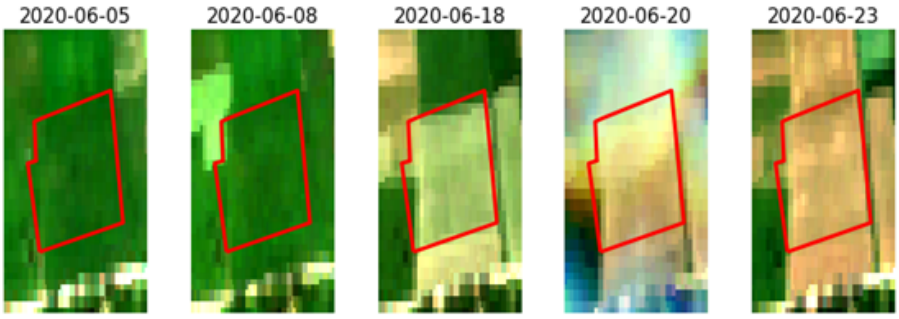
Our service provides continuous guidance throughout the cultivation period, helping PAs to monitor mowing events in real-time and make informed decisions.

Performance

Our service utilizes advanced Deep Learning algorithms and artificial vegetation indices to accurately detect and track mowing events in grasslands.

Efficiency

Our service allows for the efficient monitoring of mowing events in grasslands, reducing the need for costly manual field visits and inspections.



Grassland Mowing Events Detection

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WHAT OUR CUSTOMER SAYS:

"By participating in the ENVISION project, NPA not only gains valuable experience in developing and improving the Automatic Field Continuous Monitoring System (ALNSIS) but also plans to use the tools developed by ENVISION in its daily activities to open up data to farmers, scientific institutions and other organisations. The tools developed within the scope of the ENVISION project will significantly reduce administrative burden both for the NPA and will allow the farmers to accordingly verify monitoring results. These tools include Cultivated Crop Type Maps, Runoff Risk assessment for NVAs water pollution, Minimum soil cover for Soil Erosion, Stubble Burning Identification, Harvest Events Monitoring, and Grassland Mowing Events Detection.

ALNSIS, which was put into use this year, makes it possible to identify farmers who are simulating farming activities throughout the territory of Lithuania and to allocate more support to those who are actually carrying out agricultural activities and comply with the requirements for receiving EU support. The new system helps to reduce also the number of NPA inspectors' visits to farms; it informs farmers about obligations and commitments that have not yet been fulfilled."

NPA- National Paying Agency Lithuania

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