



UC2



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Generated boundaries in 2021

Based on Sentinel 2 data and GSAA parcels from a whole country/region

Example with preliminary boundaries



Country	Lithuania	Spain Castile and León	Spain Andalusia	Hungary – used Gitlab code
S2 data timeframe	April 2021	April 2020	April 2020	May 2021
GSAA data (input)	2020 (1 178 899)	2020 (3 404 052)	2020 (2 207 783)	2020
Result (parcels N)	827 174	1 764 732	1 319 991	NA
Results date	2021-05-14	2021-01-12	2021-09-30	2021-06-08
Quality (based on VHR or S2)	83% (from 115 parcels) RP – Physical blocks	50% (from 100 parcels) RP- Cadastral	Huelva 40%, Sevilla 58% (from 100 parcels of each)	NA RP – Physical blocks

Testing insights

- The segmentation tool is more helpful to Member states that have a physical, agricultural or farmer block-based LPIS.
- It could also prevent the declaration of non-eligible elements and on the other hand, ensure the full declaration of eligible parcel area.
- It could prevent parcels declaration by cadastral boundaries on homogenous crop parcel (artificial splitting) and would guide farmer to declare as one parcel, which in the end would increase the average parcel size and reduce the problem of small parcels for AMS.
- It could be a tool used in the context of the GSAA QA, which will be mandatory for the paying agencies to implement from 2023.
- It could also be very effective for the non-EU countries by automatically delineating (identifying) most of the agricultural parcels and non-eligible elements while establishing LPIS and IACS.

Possible improvement actions after testing

- The accuracy could be improved by running the algorithm on May, June and July images (the contrast among fields is better visible) while considering that under CbM, farmers can modify their single application until August 31st.
- The accuracy could be improved by using a Sentinel-2 deep-resolved basemap, using a proprietary algorithm managing to downscale Sentinel-2 from 10m down to 1m.

Sen4CAP results at the beginning of declaration

Link with NIVA Use Case 2 Prefilled application – tested in Lithuania

Checked crop/land cover type early stage classification results:

- at the beginning of declaration
- analysed at what concrete time and of how much quantity (crop types/ parcels/area/farmers)

6 tests with S1S2, S2, S1 and 2019 GSAA data were conducted:

- 3 tests for the period from 01/01/2020 until 10/04/2020
- 3 tests for the period from 01/11/2019 until 10/04/2020

At the beginning of declaration enable preliminary checks and prevention of:

1. Permanent grasslands code mixed with arable land crop codes;
2. Winter crops mixed with other crops;
3. Winter rape mixed with other crops;

	2020 declared	2020 S1S2	2020 only S2	2020 only S1	2019_2020 S1S2	2019_2020 only S2	2019_2020 only S1
Parcels	1 145 511	815 416	927 760	80%	872 254	927 760	872 254
Area, ha	2 906 642	2 577 892	2 860 065	98%	2 712 191	2 860 065	455 063
Farmers	123 145	108 994	122 974	99%	116 727	122 974	19 975

Robotic Process Automation (RPA) Tool

RobotFramework tool is finalized – tested in Lithuania

- Selected solution - Robot Framework
 - Tested with current process for organic farming
- Customized it and launched it for Natura 2000 fields data:
 - automatized data copying from State Forest Service website
 - forest management plan number is updated as attribute in a declared fields DB in PA
 - existing numbers submitted during declaration cross checked with official data source

<http://projektai.amvmt.lt>

20 50 100 200

Paieška pagal:

registravimo numerį 50564 leškoti Išvalyti paiešką

Kadastr. numeris	Valdos kaimas	Savivaldybė	Projekto autorius	Inventorizavo	Inventoriz. metal	Projekto registravimo numeris	Projekto būklės data (V)	Projekto pabaigos data
8627/0003:25	Serlediskis	Svenčionių rajono savivaldybė	S L			50564	2014-12-11 12:21:45	Patvirtinta 2015-03-03

Forest management plan number



Declared fields DB in PA

Tvarkyti deklaruotų laukų duomenis

2KPP, NATURA duomenys

Kadastr. Nr.:	8624/0003:25	Mišk. proj. Nr.:	50564
Paž. dir.:	Aukštaitijos nacionalinio park	VMVT paž. Nr.:	
Žem. vad. Nr.:		Leidimo ser. Nr.:	
Žem. vad.:		Išvados rengėjas:	
Plotas:	1.07	Natura pavad.:	Labanoro regioninis parkas
ATM apr.:	PK		

Žeminio posėlio pasėliai

THANK YOU




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