

Enhancing the user uptake of Land Cover / Land Use information derived from the integration of Copernicus services and national databases „InCoNaDa”

AGENDA



9:00 – 9:10	Agata Hościło (Institute of Geodesy and Cartography - IGIK), Geir-Harald Strand (Norwegian Institute of Bioeconomy Research - NIBIO) <i>Welcome to the 1st InCoNaDa webinar</i>
9:10 – 9:30	Agata Hościło (IGIK) <i>Introduction to the InCoNaDa project & short presentation of the CLMS products examined in the project</i>
9:30 – 9:50	Monika M. Cysek-Pawlak, Jakub Misiak (Łódź University of Technology - ŁUoT), Sebastian Eiter, Geir-Harald Strand (NIBIO) <i>The urban and spatial planning needs towards geospatial LC, LU and LU-change information in Poland and Norway</i>
9:50 – 10:10	Daria Stosio (IGIK, PW) & Jakub Misiak (ŁUoT) <i>Potential of HRL-Imperviousness for assessment of biologically active areas</i>
10:10 – 10:30	Adam Waśniewski (IGIK) <i>Hierarchical approach for land cover classification using Sentinel-2 data</i>
10:30 – 10:40	Tea/Coffee Break
10:40 – 11:10	Marcin Żaczek & Sylwia Waśniewska (Institute of Environmental Protection - National Research Institute IOŚ-PIB) <i>Enriching LULUC data application with CLMS products</i>
11:10 – 11:40	Svein Olav Krøgli & Wendy Fjellstad (NIBIO) <i>Copernicus HRL-WAW for monitoring agricultural landscapes and identifying and monitoring wetlands in Norway</i>
11:40 – 12:00	Aneta Lewandowska & Agata Hościło (IGIK) <i>Copernicus HRL-WAW for assessment of Ecological Focus Areas and identifying and monitoring wetlands in Poland</i>
12:00 – 12:30	Discussion
12:30	End of the event





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Introduction to the project & short presentation of the CLMS products examined in the project

Agata Hościło & the InCoNaDa Team



- To integrate the LCLU data available in various databases to meet the needs of the national and European regulations.
- To assure the semantic consistency by harmonizing the data from different sources.
- There is limited knowledge on how useful are the Copernicus services and products for decision makers, reporting obligations, natural resources monitoring at the local, regional, national levels.
- There is a need for applied research linked to ongoing national programs to examine the fitness for use and demonstrate the benefits as well as the limitations of the CLMS data in this context.



Aim: to improve the user uptake of Land Cover / Land Use (LCLU) information derived from the integration of Copernicus Land Monitoring Service (CLMS) and national databases.

Objectives:

- to develop land cover and land change maps based on a time series of Sentinel-2 data using machine learning approaches;
- to verify the EAGLE concept based on interlinking LC and LU information and other landscape characteristics (CH) available at the country level;
- to design and develop web-based application enabling to query the LCLU database, generate statistics and land use information adjusted to the user needs in Poland;
- to examine the usefulness of CLMS for:
 - urban and spatial planning;
 - agricultural management;
 - environmental monitoring;
 - reporting GHG emissions and removals from LULUCF.

- Instytut of Geodesy and Cartography - Centre of Applied Geomatics (IGiK) (project promotor)
- Norwegian Institute of Bioeconomy Research (NIBIO)
- Institute of Environmental Protection - National Research Institute (IOS) (National Centre for Emissions Management (KOBiZE))
- Łódź University of Technology (LUoT) - Institute of Architecture and Urban Planning
- Eversis Sp. z o.o.



Duration of the project 1.10.2020 – 30.09.2023

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WP1: Enrichment of the land cover, land use databases

developing the best possible automated **land cover and land cover change map based on a time series of Sentinel-2**, integration of LCLU information classification, CLMS products and national databases following the EAGLE concept.

WP2: Developing a web-based application enabling the integration of LCLU data derived from the national databases and CLMS products for Poland.

WP3: LCLU for urban and spatial planning

- **assessment of the requirements of the urban and spatial planning towards geospatial LCLU and LCLU-change information,**
- potential of CLMS for mapping and monitoring LC and LC-changes,
- public access to green urban areas,
- **biologically active surfaces**

WP4: LCLU for the agricultural sector

dealing with the assessment of the potential of the CLMS products for supporting agricultural policy in Poland (under the CAP- Ecological Focus Areas) and national agricultural policy in Norway.

- **HRL Water and Wetness**
- HRL Small Woody Features
- HRL Imperviousness

WP5: LCLU for environmental monitoring, dealing with the evaluation of suitability of CLMS for

- **mapping and monitoring of biodiversity and wetland ecosystems**,
- assessment of vegetation along streams and waterways,
- mapping the high natural value grasslands
- Preparation of landscape audit in Poland

WP6: LCLU for reporting GHG emissions and removals from LULUCF sector,

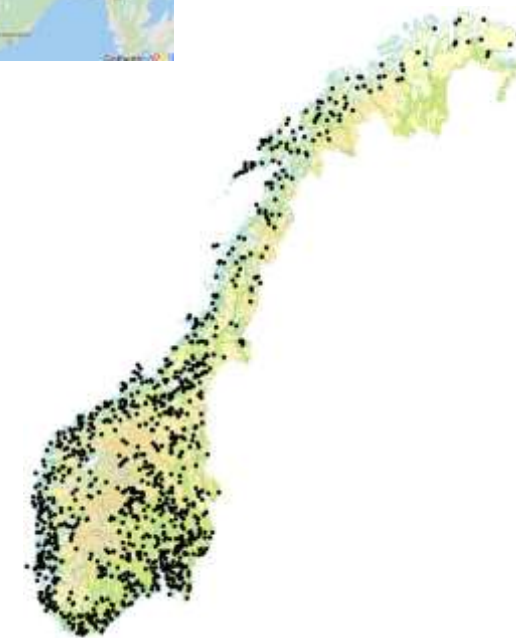
- **review of the EU and national regulations related to reporting obligations in the context of land cover, land use and changes**
- Assessment of the usefulness of CLMS products for reporting GHG emissions and removals from LULUCF.

Verification and testing the **LCLU web-based application** for the needs of spatial planning, agriculture, environmental monitoring, reporting and LULUCF related obligations.

Poland - Łódź Province



Norway - Viken county



High Resolution Layers



Imperviousness



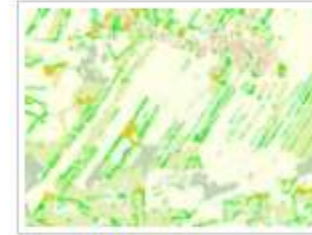
Forests



Grassland



Water & Wetness



Small Woody Features



Imperviousness

IMD – Imperviousness 2018

IMCC – Imperviousness Change 2015-2018

Forests

DLT – Dominant Leaf Type 2018

DLTC – Dominant Leaf Type Change 2018

TCD – Tree Cover Density 2018

TCCM – Tree Cover Change Mask 2015-2018

Grassland

GRA – Grassland 2018

GRAVPI – Grassland Vegetation Probability Index 2018

PLOUGH – Ploughing Indicator 2018

Water and Wetness

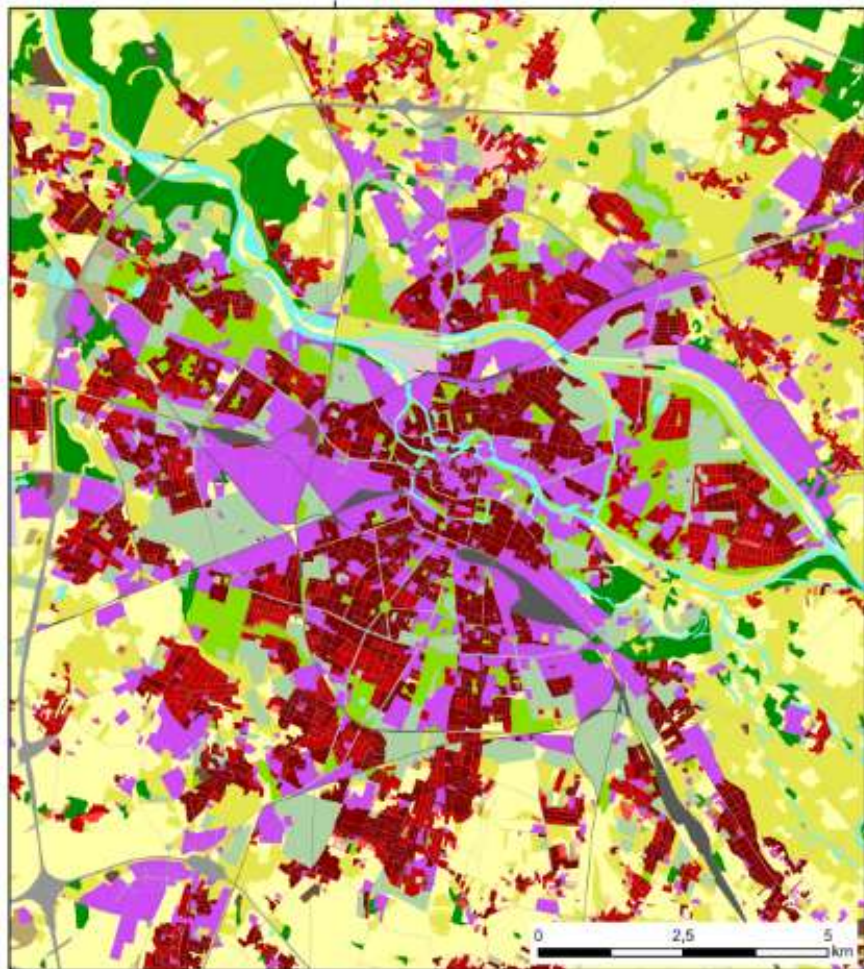
WAW – Water and Wetness 2018

WWPI – Water and Wetness Probability Index 2018

Small Woody Features

SWF – Small Woody Feature 2015, 2018

Urban Atlas



- 11100: Continuous Urban fabric (S.L. > 80%)
- 11210: Discontinuous Dense Urban Fabric (S.L.: 50% - 80%)
- 11220: Discontinuous Medium Density Urban Fabric (S.L.: 30% - 50%)
- 11230: Discontinuous Low Density Urban Fabric (S.L.: 10% - 30%)
- 11240: Discontinuous very low density urban fabric (S.L. < 10%)
- 11300: Isolated Structures
- 12100: Industrial, commercial, public, military and private units
- 12210: Fast transit roads and associated land
- 12220: Other roads and associated land
- 12230: Railways and associated land
- 12300: Port areas
- 12400: Airports
- 13100: Mineral extraction and dump sites
- 13300: Construction sites
- 13400: Land without current use
- 14100: Green urban areas
- 14200: Sports and leisure facilities
- 21000: Arable land (annual crops)
- 22000: Permanent crops
- 23000: Pastures
- 24000: Complex and mixed cultivation patterns
- 25000: Orchards
- 31000: Forests
- 32000: Herbaceous vegetation associations
- 33000: Open spaces with little or no vegetations
- 40000: Wetlands
- 50000: Water



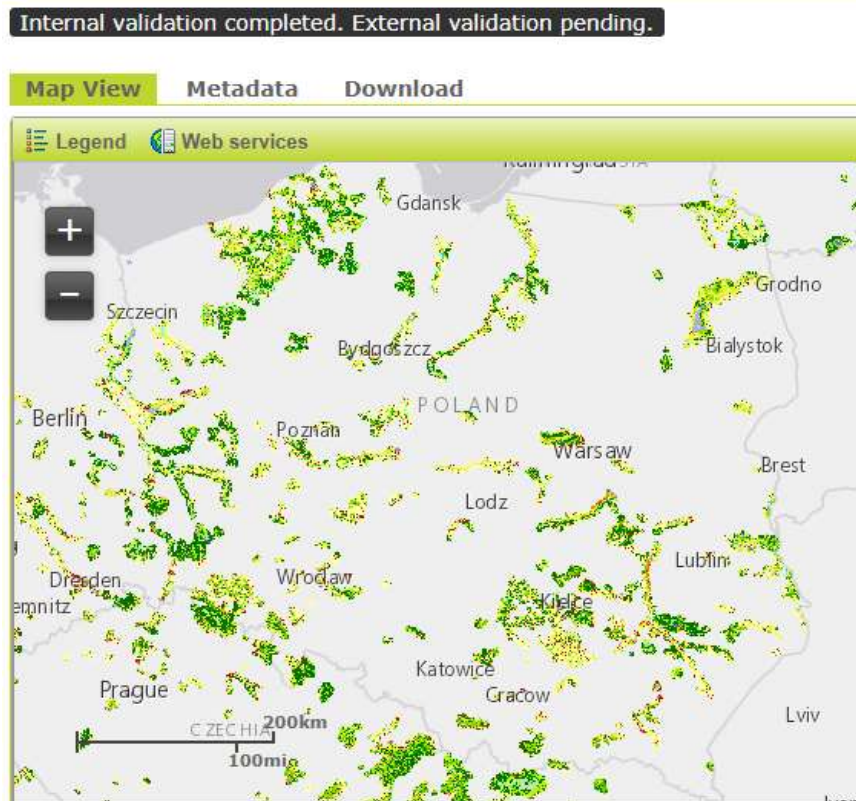
Urban Atlas - Street Tree Layer



CLMS products planned to be examined

Riparian Zones 2012
Natura2000 2018

N2K 2018



Land Cover/ Land Use



Thank you for your attention

<https://www.inconada.eu/>

Contact

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