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LIFE CROLIS

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Requirements for Georeferencing and Digitalization of Spatial Data in the New EU Legislation on Climate, Environment, and Biodiversity

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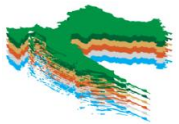
Introduction

- Project **LIFE CROLIS** deals with the development of a harmonized data model for land monitoring in Croatia.
- Project has unique demonstrative character in the EU.
- Key objectives:
  - To develop and set-up the first multi-scale and multi-purpose land monitoring system in Croatia
  - To apply CROLIS data for the LULUCF reporting and accounting purposes in line with the requirements of international (UNFCCC, KP, PA) and EU legislation
  - To enable and secure a permanent CROLIS implementation by national authorities, decision makers, experts, NGOs and other stakeholders
  - To provide a robust basis for planning and implementation of GHG mitigation actions in the LULUCF sector
- One of project tasks: to define user requirements for state authorities arising from EU and Croatian legislation.
- The goal of this paper is to inform the public about **new Union legislation** related to environmental, biodiversity and climate policies (in force or in the process of adoption) **that requires precise georeferencing or data digitalization.**

LIFE CROLIS



LIFE CROLIS at a glance

Coordinating beneficiary:
- Ministry of Environment Protection and Green Transition (MEPGT)

Associated Beneficiaries:
- Paying Agency in Agriculture, Fishery and Rural Development (PAAFRD)
- State Geodetic Administration (SGA)
- Croatian Forests Ltd. (CF)
- Ekonerg Ltd. (EKONERG)

Advisory Board
- technical advise with international members (AT, UK, HR)

Duration of the project: 75 months
- 1.10.2020-30.4.2024-31.12.2026

Total value of the project:
- EUR 6,248,735

EU co-financing (LIFE Programme):
- EUR 2,588,207

Employees:
- 27 (vary 22-36)

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- New EU laws since 2019:
  - 1) Regulation on the alignment of reporting obligations in the field of legislation related to the environment (Regulation (EU) 2019/1010)
  - 2) LULUCF regulation (Regulation (EU) 2023/839)
  - 3) Nature restoration law (Proposal for a Regulation COM(2022) 304 final)
  - 4) Forests monitoring law (Proposal for a Regulation COM(2023) 728 final)
  - 5) Regulation on certification of goods and products associated with deforestation and forest degradation (Regulation (EU) 2023/1115)
  - 6) Soil monitorig law (Proposal for a Directive COM(2023) 416 final)
  - 7) Regulation dealing with Cross compliance within the CAP (Regulation (EU) 2021/2115)
  - 8)Certification of carbon removals (Proposal for a Regulation COM(2022) 672 final)

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- Regulation (EU) 2019/1010 (…) of 5 June 2019 on the alignment of reporting obligations in the field of legislation related to the environment
  - enhances environment information management, simplify reporting, and reduce administrative burden.
  - lays the groundwork for improving databases for future assessments and increases transparency of data of public interest.
  - changes to the legislative package determine the format and method of digital data sharing.

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- Regulation (EU) 2023/839 (…) of 19 April 2023 amending Regulation (EU) 2018/841 as regards the scope, simplifying the reporting and compliance rules, and setting out the targets of the Member States for 2030 (LULUCF regulation) **requires**:
  - the establishment of a comprehensive land monitoring system.
  - geographically explicit data on conversion by 2030.
  - monitoring on annual basis across the entire surface of Croatia,
  - calculations use (country) specific carbon sink factors based on climate-vegetation zones and types of land cover/crops/products.
  - background emission levels caused by natural disasters (such as fires, floods, landslides, desertification…).
  - geospatial data on land use, land cover and land use changes should cover the timeframe from 1970-es to 2030.

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- Proposal for a Regulation (…) on nature restoration, 22.6.2022. COM(2022) 304 final (ADDOPTED)
  - Development of national restoration plans for the period up to 2050.
  - These plans will need to establish georeferenced maps of areas included in nature restoration efforts, along with prescribed actions.
  - Monitoring results will need to be submitted annually through Monitoring Reports,
  - data on the location and extent of areas covered by restoration measures will need to be provided every three years, including georeferenced maps of those areas.
- Proposal for a Regulation (…) on a monitoring framework for resilient European forests, 22.11.2023. COM(2023) 728 final
  - Forests monitoring law will require the establishment of a forest monitoring system. The forest monitoring system should consist of:
    - a geographically explicit identification system for mapping and locating forest units,
    - a framework for collecting forest data on annual basis,
    - a framework for exchanging forest data.

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- Regulation (EU) 2023/1115 (…) of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation
  - certification of origin for certain goods and certain products (such as soy, beef products, and timber) proving that are not associated with deforestation and forest degradation
  - an information system is being established that, should georeference land parcels larger than four hectares that are used to produce relevant goods.
- Proposal for a Directive (…) on Soil Monitoring and Resilience (Soil Monitoring Law), 5.7.2023. COM(2023) 416 final
  - Member States will need to establish a framework for monitoring soil health, contaminated sites and their remediation, and permanent coverage (so-called sealing), and conduct regular measurements on soil samples taken “in situ.”
  - Member States will need to report results and trends every five years.

Requirements for georeferencing and digitalization of spatial data in the new EU legislation

- Regulation (EU) 2021/2115 (…) of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) requires
  - identification (including geolocation) of carbon-rich soils (preservation of wetlands and peatlands areas),
  - identification (including geolocation) of agricultural land (within the LPIS system), where agricultural activities supported by CAP annual payments are assessed (cross-compliance checks) against the GAEC 2 standard.
- Proposal for a Regulation (…) establishing a Union certification framework for carbon removals, 30.11.2022. COM(2022) 672 final.
  - establishes a voluntary framework for the entire EU, sets criteria for high-quality carbon removals, and a procedure for monitoring, reporting, and verifying the authenticity of these removals.
  - Farmers and forest owners will be able to certify carbon storage using a credible system such as the existing LPIS **or a similar credible system.**
  - Operators who permanently store carbon through technological carbon storage in geological structures must also have georeferenced storage locations.
  - The explicit geolocation of the storage must be stated in the appropriate certificate with which the operator participates within the certification scheme.

Discussion

- The presented package of EU legislation promotes the digitalization of information and data, their georeferencing (i.e., precise spatial positioning), and their sharing. The requirements of the new legislation are focused on:
  - determining the actual state of the environment based on remote monitoring and georeferencing of collected data,
  - exchange of digital information among Member States and other stakeholders,
  - standardization of data collected from different sources and exchange of these data,
  - establishing a timeline for collecting data and information to monitor changes and trends in the environment and climate.
- The quality of collected information and spatial data is always a challenge, which is addressed:
  - by strict data requirements specification for established reporting systems or
  - by data evaluation during audits for developing reporting systems.

Conclusions

- The development of a comprehensive monitoring system for different indicators on climate, nature and environment changes and their impacts to society, as well as information on the effects of policies implementation in these areas against the time is becoming increasingly important.
- Pairing and interpretation of data based on objective indicators and models are necessary for making informed decisions.
- In the area of climate and energy, environment, and nature policies EU not only set high requirements for the collection, standardization, and processing of data but also enable, encourage, promote, and assist Member States in establishing monitoring systems.

Thank you for attention!

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