Open European Location Services

Core Reference Dataset (CRD)

Saulius Urbanas, EuroGeographics
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Background

- End 2017 – Summer 2018. European Environment Agency and DG GROW proposals for 2nd generation of Corine Land Cover (CLC) products to develop a "CLC-Backbone" of persistent spatial objects for European Commission.
- "Soft bones" – raster product, pixel-based (Sentinel-2 based), 10*10m2, pure land cover classes.
- "Hard bones" – vector product, themes: Hydrography (Rivers, channels), and Transport (Roads, Railroads), 1 ha MMU, 20 m MMW
- Source: National reference data from MS; Open street map data; Commercially available navigation data.
- The specification has been postpone to Autumn 2018, the production by a contractor is expected at 2019

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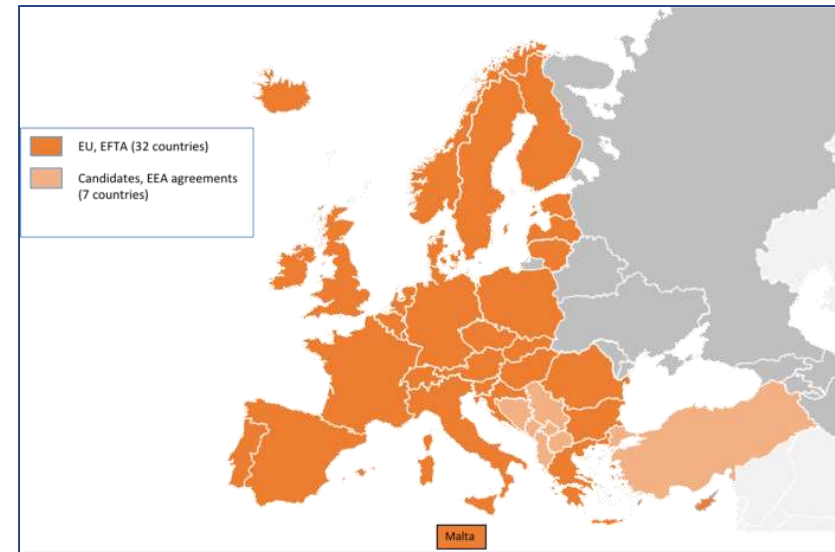# Corine Land Cover + products development

1. **CLC-Backbone** is a spatially detailed, large scale inventory in vector format providing a geometric spatial structure for landscape features with limited, but robust EO-based land cover thematic detail on which to build other products.

2. **CLC-Core** is a consistent, multi-use grid^3 database repository for environmental information populated with a broad range of land cover, land use and ancillary data, forming the information engine to deliver and support tailored thematic information requirements.

3. **CLC+** is the end point for this specific exercise and is a derived vector and raster product from the **CLC-Core** and **CLC-Backbone** and will be a LULC monitoring product with improved spatial and thematic performance, relative to the current CLC, for reporting and assessment.

4. The final element of the conceptual design, although not strictly a new product, is the ability to continue producing the existing CLC, which may be referred to as **CLC-Legacy** in the future, which already has a well-established and agreed specification.

"Hard bone" reference features are needed for CLC-Backbone land cover polygon formation

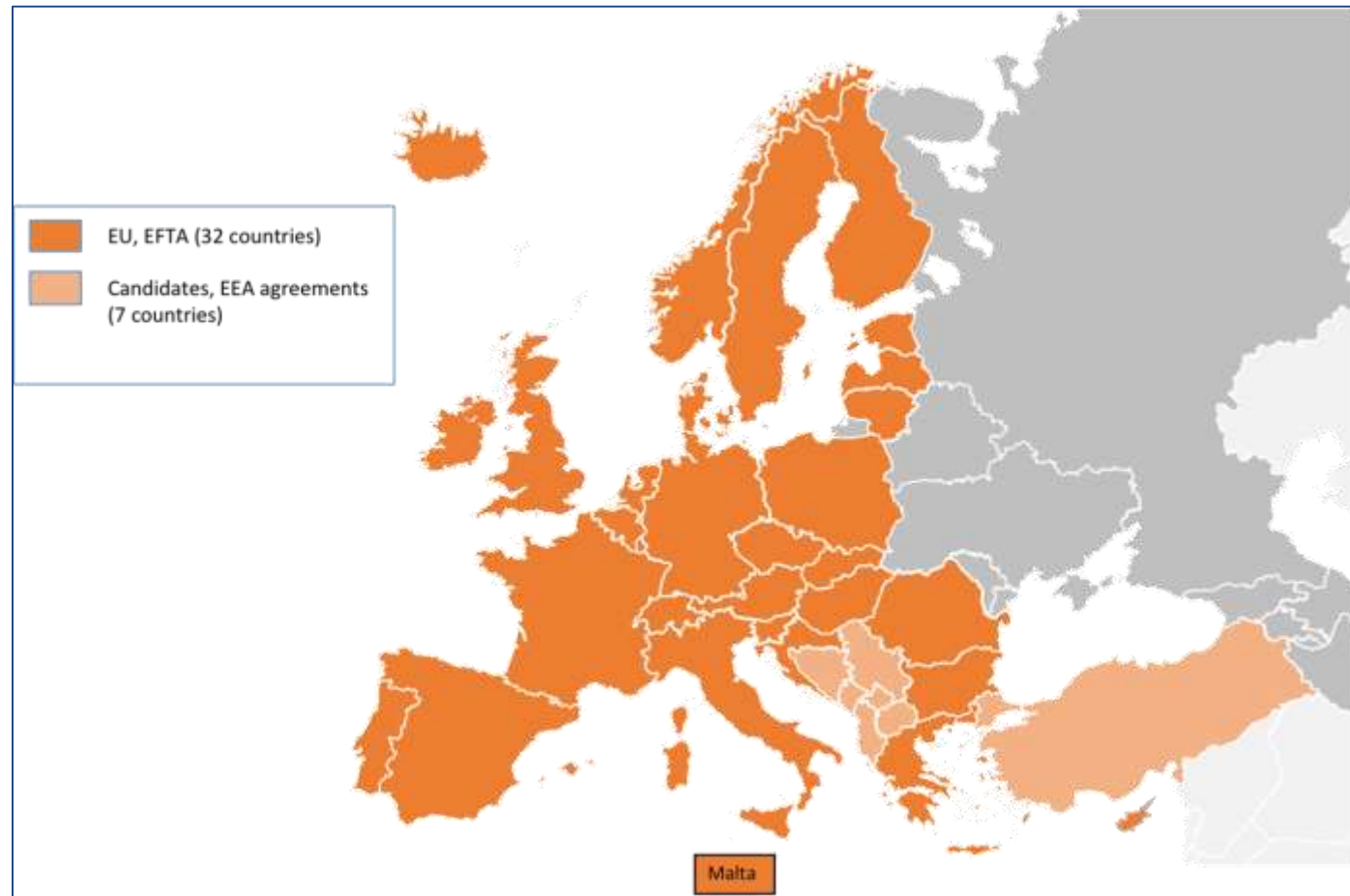# How to simplify a use of INSPIRE compliant data

- European stakeholders demands
  - Datasets instead of web-services
  - Simplified INSPIRE specification
  - Harmonised pan-E coverage
  - Definitive location of "Core" features

- EuroGeographics initiated a compilation of **Core Reference Dataset (CRD)**
  - Themes: Transport Networks (Road, Rail), Hydrography
  - Harvest authoritative data used for INSPIRE web-services
  - Based on INSPIRE requirements but adjusted to an easier structure
  - Seamless and consistent across borders
  - Consistent between themes, so that different themes can be used together
  - Up-to-date, maintained and quality ensured

EU, EFTA (32 countries)

Candidates, EEA agreements (7 countries)

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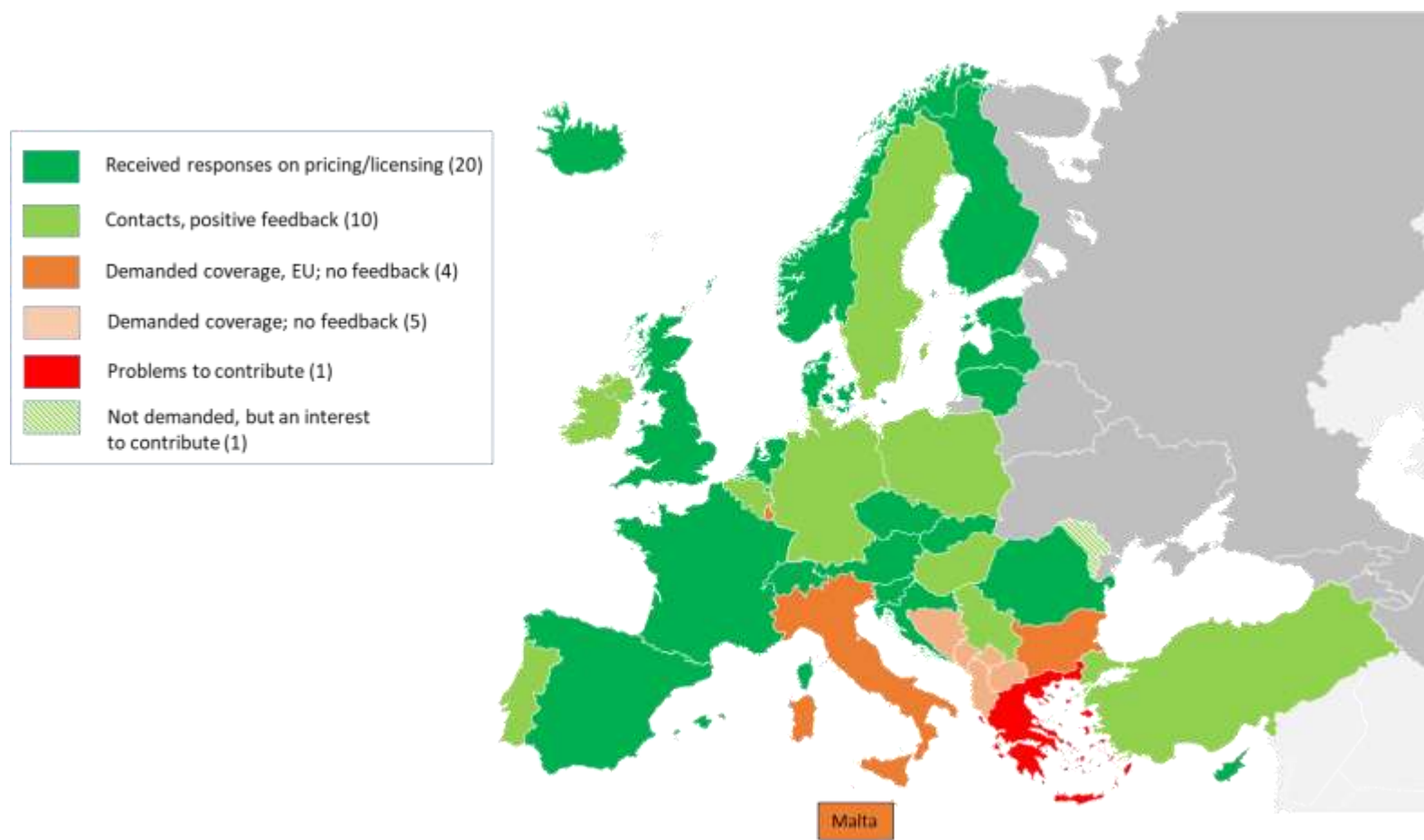Connecting Europe Facility

Interested pan-European stakeholders

- Eurostat – the tender for GISCO acquisition of topographic data layers (July 2018)
    - 4 years prospect
    - Themes: Administrative and statistical regions, Postal codes and addresses, **Hydrography**, **Transport networks and infrastructure** (road, railway, water, air), Buildings, built-up areas and populated places, Points of interest POIs, Energy infrastructure
    - Scale: Global (1:1mln), Regional (1:250k), Medium (1:50k – 1:100k), Large (1:5k – 1:25k)
- Other demands from EC and European stakeholders
    - DG GROW (Copernicus Emergency Management Service, EU-DEM), JRC (EU Gazetteer), DG MOVE (Trans European Network), DG JUST (e-Justice)

Demanded coverage by EEA

Legend:
- EU, EFTA (32 countries)
- Candidates, EEA agreements (7 countries)

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NMCAs' consultation regarding the production of Core Reference Dataset (CRD)

Received responses on pricing/licensing (20)

Contacts, positive feedback (10)

Demanded coverage, EU; no feedback (4)

Demanded coverage; no feedback (5)

Problems to contribute (1)

Not demanded, but an interest to contribute (1)

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Pricing and Licensing

- Data providers are asked to sign the **Annex to Framework License Agreement (FLA)**
  - Intellectual Property Rights are compliant to other EG products
    - The Product Partners and EuroGeographics have, except if agreed otherwise, a jointly owned copyright to the EuroGeographics' products and services to which they contribute.
    - The jointly owned copyright is limited to the EuroGeographics' products and services as such, and no Intellectual Property Rights are transferred from a Product Partner to any other Product Partner or another Party to this Agreement unless this is specifically stated.
    - The Intellectual Property Rights in each Product Partner's Source data and any other information provided by each Product Partner under this Agreement is and shall remain owned by the Product Partner providing such Source data or information.
- Data provider shall indicate the **base price:**
  - The annual price you would charge a single user for use of your national data, excluding your sales, marketing and delivery costs; OR
  - the licence fee you would receive from the licensing of your national data by a reseller for an annual single user licence.
  - Your base price can be zero (e.g. if it is available as open data)

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Core Reference Dataset (CRD) – Timetable

June 2018 → BKG has been appointed as Technical Coordinator

→ CRD specification and Guidelines for DPs

July 2018 → Call for contribution to CRD

Oct 2018 → CRD prototype v0.1

Oct 2018 – March 2019 → Data production process
- ➢ Compilation of the CRD from the contributions of NMCAs;
- ➢ Centralised edge-matching of the data along borders;
- ➢ Validation the edge-matched data, quality check and corrections.

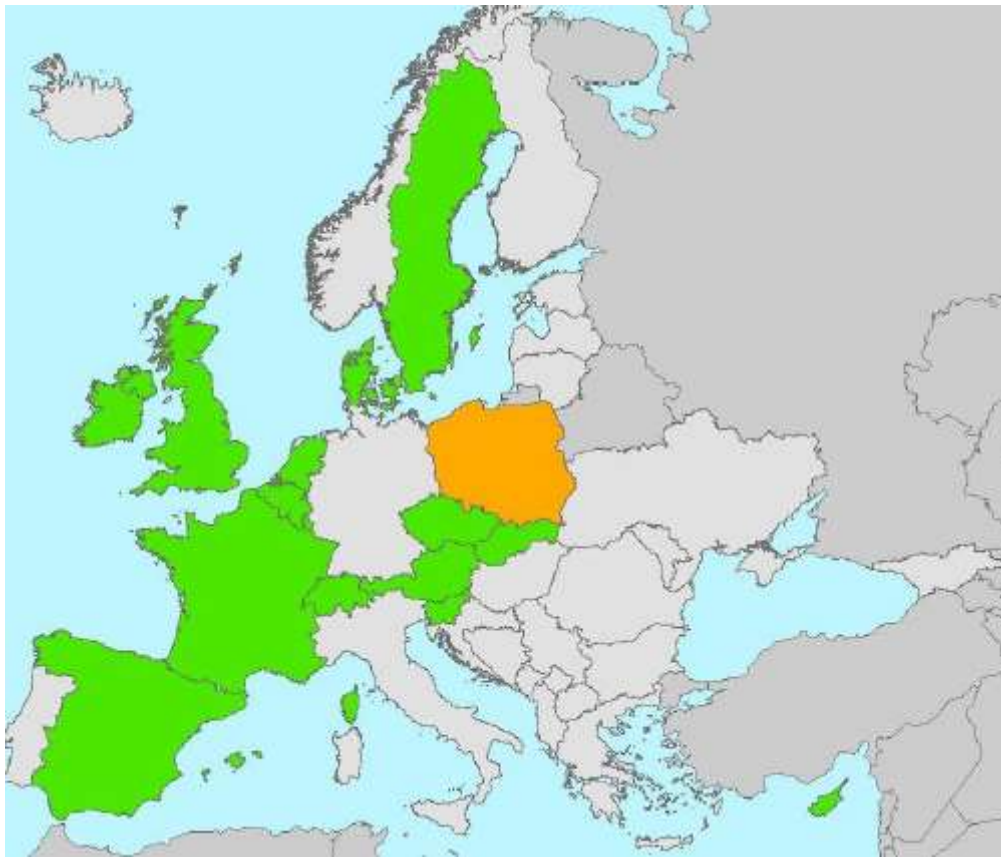April 2019 → Launch the Core Reference dataset v1.0

May 2019 → Evaluation of production process/lessons learned
- ➢ From data delivery by NMCAs
- ➢ From production process
- ➢ Feedback / requirements from (potential) users

Core Reference Dataset (CRD) – in summary

- CRD is much broader than a data source for CLC+
- CRD meets a number of demands within the EC and its Institutions
- The CRD composition is based on the INSPIRE requirements – flatten INSPIRE data model
- TN and HY are priority themes, but more themes considered for the future
- Developments towards ELS / Open ELS
  - National (INSPIRE) services for maintenance / updates
  - Centralised offering to users

Current status of contributions

17 countries:
- HY: 16
- Roads: 17
- Rail: 15

Contacts

Primary Contact:
Saulius Urbanas, saulius.urbanas@eurogeographics.org

Pricing and Licensing:
Angela Baker, angela.baker@eurogeographics.org

Technical questions on data content / delivery:
Sonja Werhahn, sonja.werhahn@bkg.bund.de

CRD basecamp:
Contact Saulius Urbanas for a subscription.