

# Handling data quality issues in the Open Cadastral Maps for Europe context

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HELLENIC REPUBLIC  
Ministry of Digital Governance

 Hellenic Cadastre

OME2



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# Open Cadastral Map (OCM)

## Objective

To develop a single point of accessing cadastral map data at a pan-European level

## Themes

- Cadastral parcels
- Buildings
- Administrative Units
- Addresses

## Consortium

- EuroGeographics AISBL (BE)
- Institut National de L' Information Geographique et Forestiere (FR)
- Dienst voor Het Kadaster en de Openbare Registers(NE)
- Institut Geographique National (BE)
- Hellenic Cadastre (GR)
- Ministerio de Hacienda Y Funcion Publica (ES)



Open cadastral map of a suburb in Athens, Greece  
Source: <https://www.mapsforeurope.org/explore-map/cadastral-all>

# Open Cadastral Map (OCM)

## Actions undertaken within the Open Maps for Europe 2 (OME2)

- **Sustain the new production**
- **Enhance production process** (getfeature functionality, additional data)
- **Increase coverage** (9 more countries by 2025)
- **Increase harmonization** of accessing cadastral data (OCM): Documentation of OCM data, Metadata Quality Assurance
- **Promote Open Cadastral Maps** (OCM) to EuroGeographics members and external audiences and develop a long-term strategy for sustaining and developing OCM



OCM Explore Map site: Status in 2025 (Current)

Link: <https://www.mapsforeurope.org/explore-map/cadastral-all>



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# Open Cadastral Map (OCM)



OCM status in 2025 (Current)

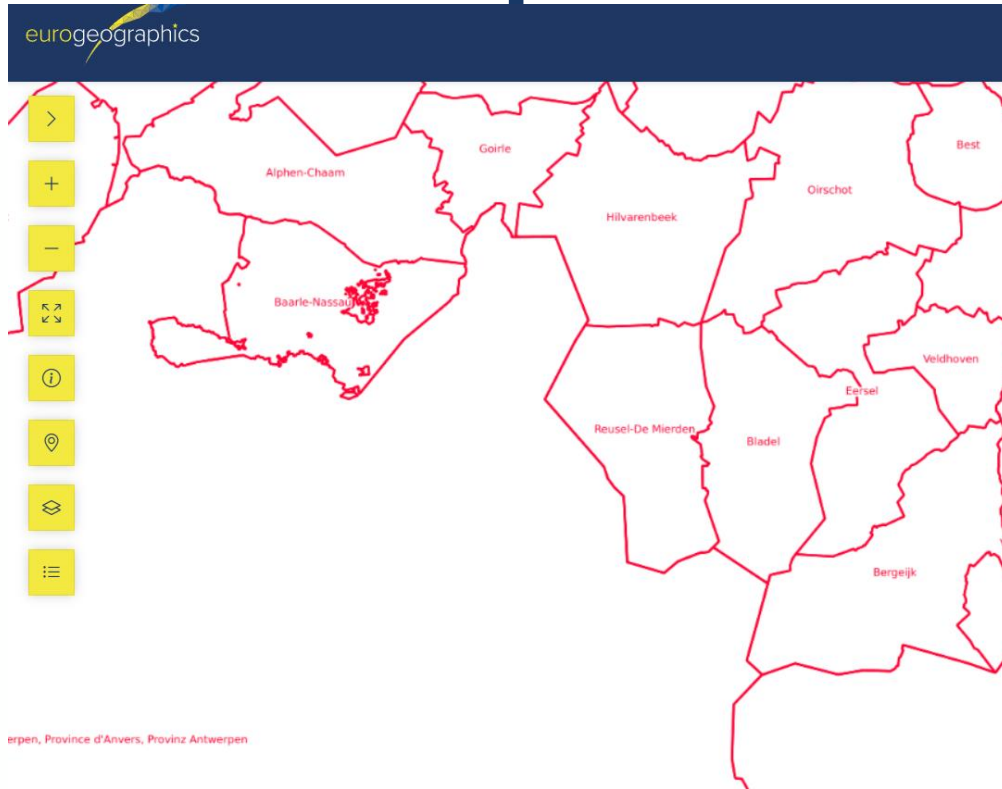
Link: <https://www.mapsforeurope.org/datasets/cadastral-all>

## Progress of the OCM development

<u>2023</u>	<u>2024</u>	<u>2025</u>
Czech Republic	Greece	Belgium
Netherlands	Latvia	Croatia
Slovenia	Luxemburg	Estonia
Spain	Slovakia	Ireland
Poland		Switzerland
Denmark		

Current status: 15 countries in the OCM site

# Open Cadastral Map (OCM)



Excerpt of the OCM On the Belgium-Netherlands border

Link: <https://www.mapsforeurope.org/explore-map/cadastral-all>



## Issues encountered in the OCM data integration

- The OCM data integration is based on the INSPIRE data structure and schema
- The INSPIRE Directive allows for:
  - Variations in the implementation
  - Different approaches for data formats (e.g. ESRI FGDB as opposed to gml) or download services (e.g. OGC WFS as opposed to ATOM Feed)
- The OCM production process imposed additional requirements
  - Required the INSPIRE endorsed gml schema (\*.zip)
  - Required the INSPIRE ATOM Feed Service for download
  - Required coordinates to be in the ETRS '89





# Open Cadastral Map (OCM)



Excerpt of the OCM On the Belgium-Luxembourg border

Link: <https://www.mapsforeurope.org/explore-map/cadastral-all>



## Quality control checks of the OCM data

- ATOM structure:
  - Logical consistency: ATOM feed indicates Cadastral Reference System (CRS) is based on ETRS89
  - Logical consistency: Download link points to a (\*.zip) file
- For each theme:
  - Logical consistency: data format. Unzipped files should be GML
  - Logical consistency: format consistency. GML match INSPIRE schema
  - Logical consistency: Correct CRS. GML files are in a CRS based on ETRS89
  - Temporal consistency: objects with same begin and end date were removed in some datasets.
- Once the data are loaded, visual inspection is carried out to check whether the data integration is OK in the service.
- Since cadastral data are authoritative, no changes due to overlaps or other issues in geometry are made.

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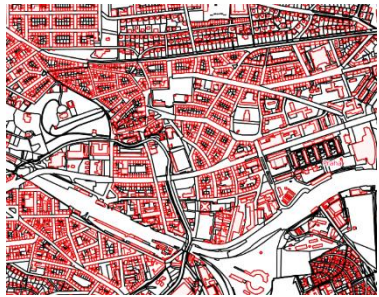
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# Conclusions

- All encountered issues have been overcome and the OCM project has achieved its goal.

- OCM data are available to users
- More flexibility in the procedures need to be adopted in the future



Czech Republic



Denmark



Greece



Latvia



Luxemburg



Netherlands



Poland



Slovakia



Slovenia



Spain