



Accessing and using cadastral maps through the Hellenic Cadastre INSPIRE Geoportal

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The INSPIRE Geoportal of the Hellenic Cadastre

The screenshot shows a web browser window with the URL [ktimanet.gr/geoportal/catalog/main/home.page?sessionId=7C5350E0B7364461AE6BF7DA570B85A9](https://www.ktimanet.gr/geoportal/catalog/main/home.page?sessionId=7C5350E0B7364461AE6BF7DA570B85A9). The page features the Hellenic Cadastre logo and the text "ΕΛΛΗΝΙΚΟ ΚΤΗΜΑΤΟΛΟΓΙΟ". A navigation bar includes links for Home, Search, Browse, and Launch Map Viewer. The main heading is "Geospatial Data INSPIRE Geoportal of the 'Hellenic Cadastre'". Below this, a paragraph explains the INSPIRE Directive (2007/2/EU) and its purpose. Another paragraph states that INSPIRE is based on spatial information infrastructures set up by EU Member States. A third paragraph mentions that the "Hellenic Cadastre" has created the Hellenic Cadastre INSPIRE Geoportal to harmonize data. A search bar with the label "Find Data" and a "Search" button is present, with instructions to press SEARCH or enter a keyword. Below the search bar, there are links for "Map" and "User's Guide", and a contact email: inspire@ktimatologio.gr. The bottom of the page shows a Windows taskbar with various application icons and a system clock displaying 11:02 μμ on 18/1/2022.

ΕΛΛΗΝΙΚΟ ΚΤΗΜΑΤΟΛΟΓΙΟ

Home Search Browse Launch Map Viewer

Geospatial Data INSPIRE Geoportal of the "Hellenic Cadastre"

The European INSPIRE Directive (2007/2/EU) aims at creating a European Union spatial data infrastructure. The European Spatial Data Infrastructure will enable the exchange of spatial information between Public Sector organizations and will facilitate public access to spatial information in each country and throughout Europe.

INSPIRE is based on spatial information infrastructures which are set up and operated by the Member States of the European Union and are compatible with each other on the basis of common implementing rules.

The "Hellenic Cadastre", in order to harmonize the data it produces and updates with the INSPIRE directive, it has created the Hellenic Cadastre INSPIRE Geoportal. With the Hellenic Cadastre INSPIRE Geoportal the user can search, display, download and invoke geospatial data of the "Hellenic Cadastre" Agency in accordance with the requirements of the INSPIRE Directive.

Find Data **Search** Press SEARCH to see a list of all the Hellenic Cadastral's available datasets
OR enter a keyword of the dataset you are looking for in the search box

Information regarding the progress of the cadastral registration are available on the [Map](#).

For instructions about navigating the geoportal please open the [User's Guide](#).

Contact email: inspire@ktimatologio.gr



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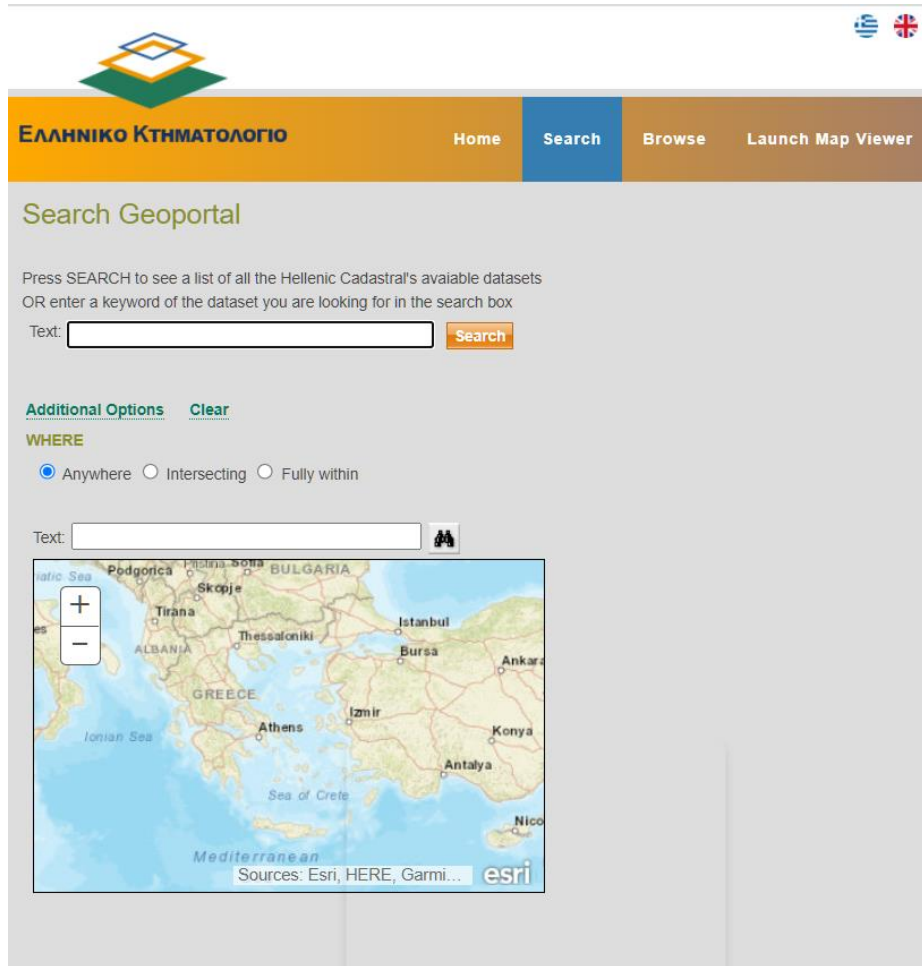
Home page of the INSPIRE Geoportal of the Hellenic Cadastre
(<https://www.ktimanet.gr/geoportal/catalog/main/home.page>)



Lolonis P 2022, "Accessing and using cadastral maps through the Hellenic Cadastre INSPIRE Geoportal", Eurogeographics, 20-01-2022

The INSPIRE Geoportal of the Hellenic Cadastre

Development of the Geoportal



Web page showing the Geoportal's layout for searching for datasets



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Goals:

- To disseminate data possessed by the Hellenic Cadastre to the public.
- Satisfy the requirements specified by the Directive 2007/2/EC (INSPIRE) about cadastral parcels.

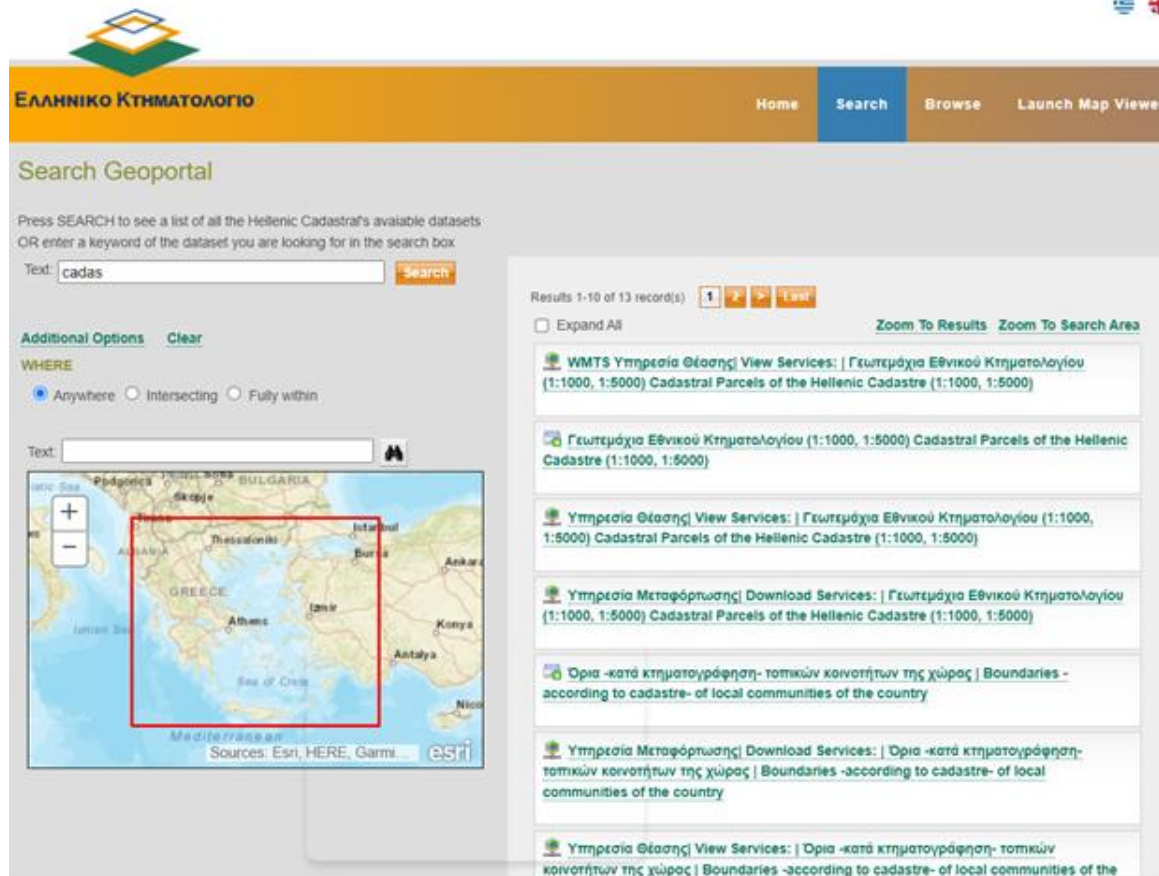
Development and operation

- The project was part of a larger EU co-financed project
- Procurement took place during: 10/2018-06/2019
- Development started on July 2019
- Completion took place on January 2020
- Operation for the public started on September 2020
- Budget: 24.800 Euros



The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



Functions

- Search for data sets
 - Users may submit queries and discover datasets that are available at the Hellenic Cadastre INSPIRE Geoportal
 - Each entry in the list is marked with a symbol that shows the function associated with that entry (downloading, viewing, available offline ...)

Web page of the INSPIRE Geoportal showing the results of the search about cadastral parcels



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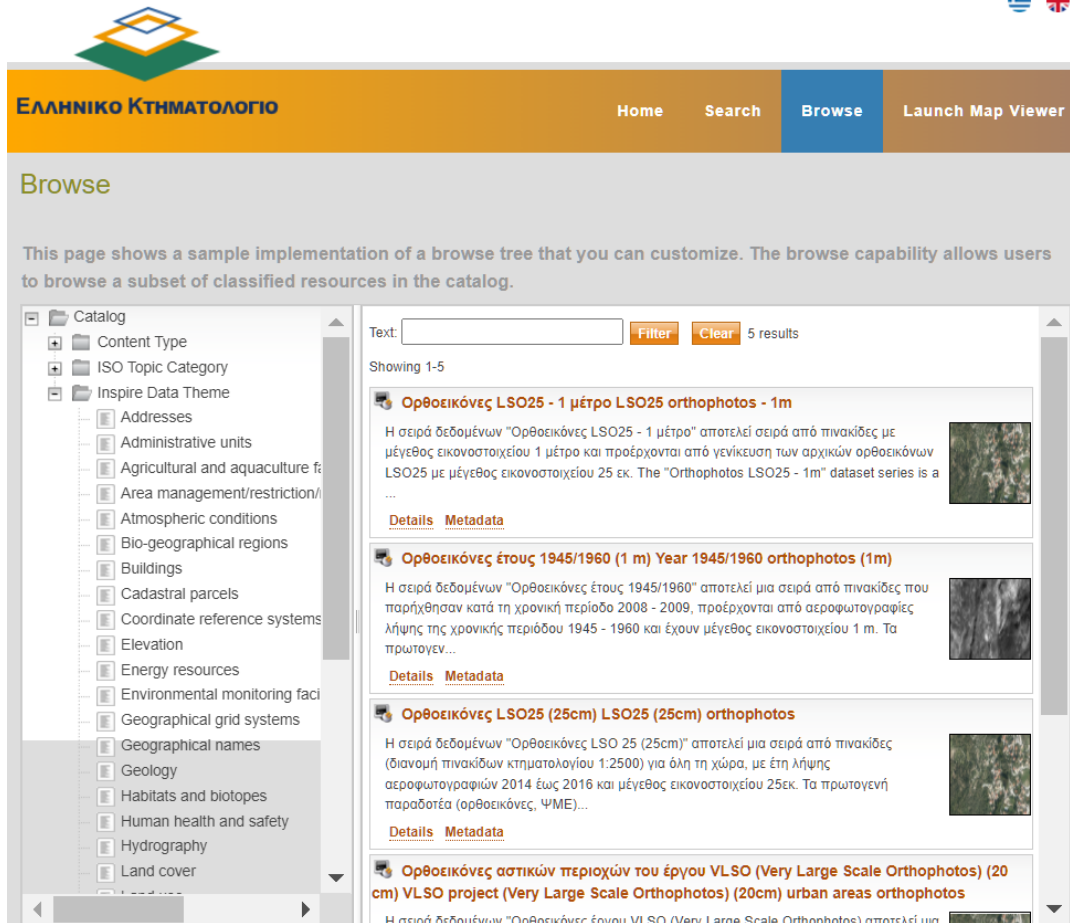
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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



The browsing function. Available datasets are classified by “content type”, “ISO topic” and INSPIRE data theme”

Functions

- Search for data sets
- Browsing
 - By content type
 - Applications
 - Geographic services
 - Offline services
 - ...
 - ISO Topic Category
 - Admin.&Pol. Boundaries
 - Cadastral
 - Elevation
 - Imagery...
 - INSPIRE Data Theme
 - Addresses
 - Cadastral parcels
 - Elevation...

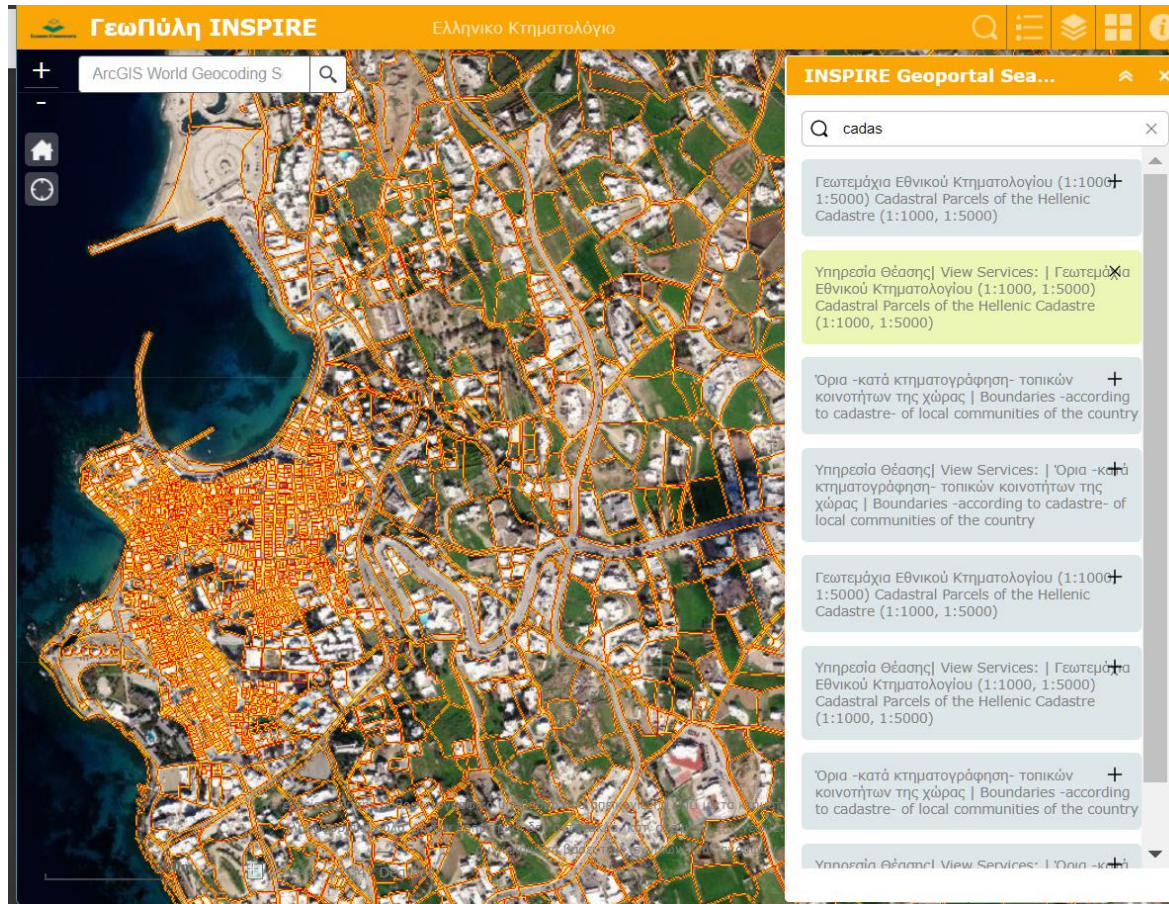


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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



Functions

- Search for data sets
- Browsing
- Viewing (map projection)

The viewing function: the cadastral map of the port of Mykonos



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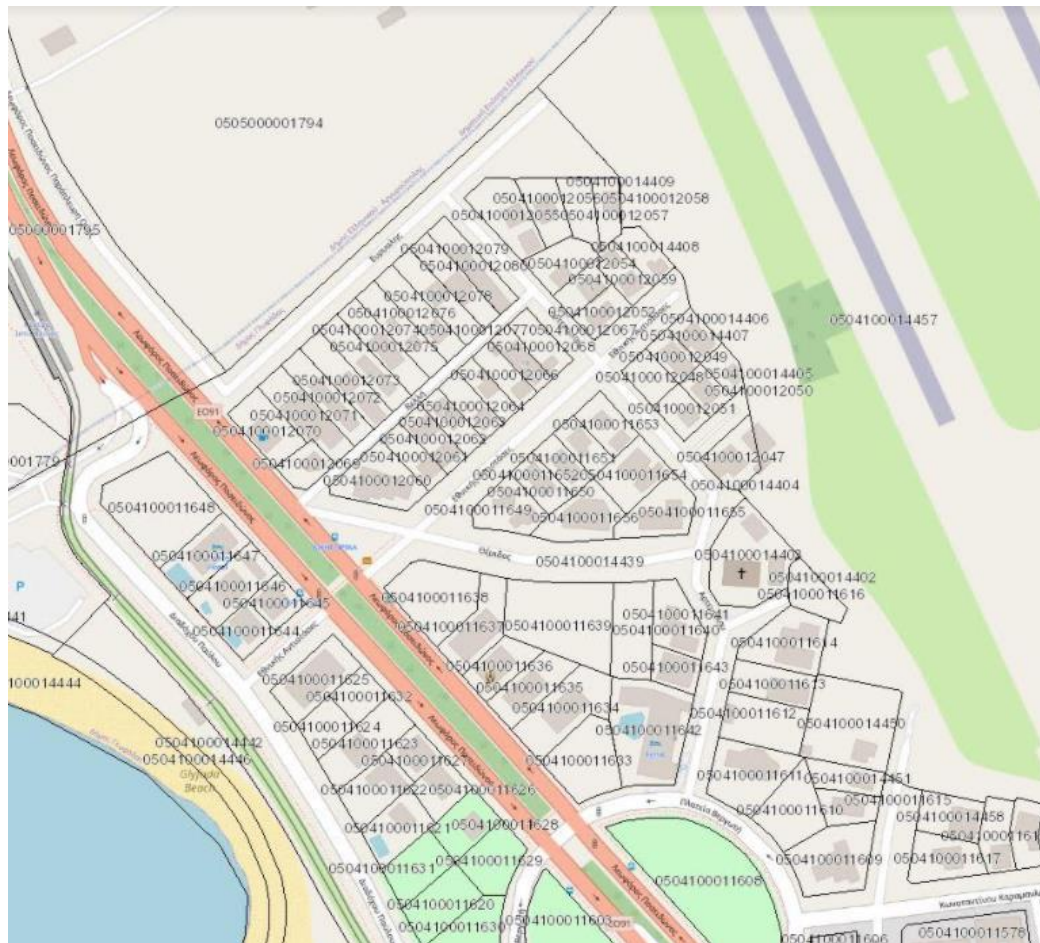
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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



The cadastral map of a coastal area in Greece as it is accessed through wfs services

Functions

- Search for data sets
- Browsing
- Viewing (map projection)
- Access and use of the data through wms and wfs services



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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal

ΕΛΛΗΝΙΚΟ ΚΤΗΜΑΤΟΛΟΓΙΟ

Home Search Browse Launch Map Viewer

Search Geoportal

Press SEARCH to see a list of all the Hellenic Cadastral's available datasets
OR enter a keyword of the dataset you are looking for in the search box

Text:

Additional Options Clear

WHERE

☒ Anywhere ☐ Intersecting ☐ Fully within

Text:

Results 1-10 of 13 record(s)

☐ Expand All [Zoom To Results](#) [Zoom To Search Area](#)

- WMTS Υπηρεσία Θέσης | View Services: | Γεωτεμάχια Εθνικού Κτηματολογίου (1:1000, 1:5000) Cadastral Parcels of the Hellenic Cadastre (1:1000, 1:5000)
- Γεωτεμάχια Εθνικού Κτηματολογίου (1:1000, 1:5000) Cadastral Parcels of the Hellenic Cadastre (1:1000, 1:5000)
- Υπηρεσία Θέσης | View Services: | Γεωτεμάχια Εθνικού Κτηματολογίου (1:1000, 1:5000) Cadastral Parcels of the Hellenic Cadastre (1:1000, 1:5000)
- Υπηρεσία Μεταφόρτωσης | Download Services: | Γεωτεμάχια Εθνικού Κτηματολογίου (1:1000, 1:5000) Cadastral Parcels of the Hellenic Cadastre (1:1000, 1:5000)
- Όρια -κατά κτηματογράφηση- τοπικών κοινοτήτων της χώρας | Boundaries -according to cadastre- of local communities of the country
- Υπηρεσία Μεταφόρτωσης | Download Services: | Όρια -κατά κτηματογράφηση- τοπικών κοινοτήτων της χώρας | Boundaries -according to cadastre- of local communities of the country
- Υπηρεσία Θέσης | View Services: | Όρια -κατά κτηματογράφηση- τοπικών κοινοτήτων της χώρας | Boundaries -according to cadastre- of local communities of the country
- Γεωτεμάχια (συνολικά) Ελληνικού Κτηματολογίου (κατά ΕΥΓΕΠ - πλέον INSPIRE) σε μορφότυπο shapefile (ΕΓΣΑ '87) - Cadastral Parcels of the Hellenic Cadastre (NSDI - non-INSPIRE), the whole set, in shapefile format for all areas in operation (HGRS '87 - EGSΑ '87)
- Ψηφιακό Μοντέλο Εδάφους του έργου LSO25 - 25 μέτρα Digital Elevation Model - DEM from the LSO25 project (25m)
- Ψηφιακό Μοντέλο Εδάφους (Digital Elevation Model-DEM) του έργου LSO (5 m) Digital Elevation Model - DEM - LSO project (5m)

See results through REST API: [GEORSS](#) [ATOM](#) [HTML](#) [FRAGMENT](#) [KML](#) [JSON](#) [DCAT](#) [CSV](#)

Functions

- Search for data sets
- Browsing
- Viewing (map projection)
- Access and use of the data through wms and wfs services
- Download services

The INSPIRE Geoportal page for downloading cadastral parcels

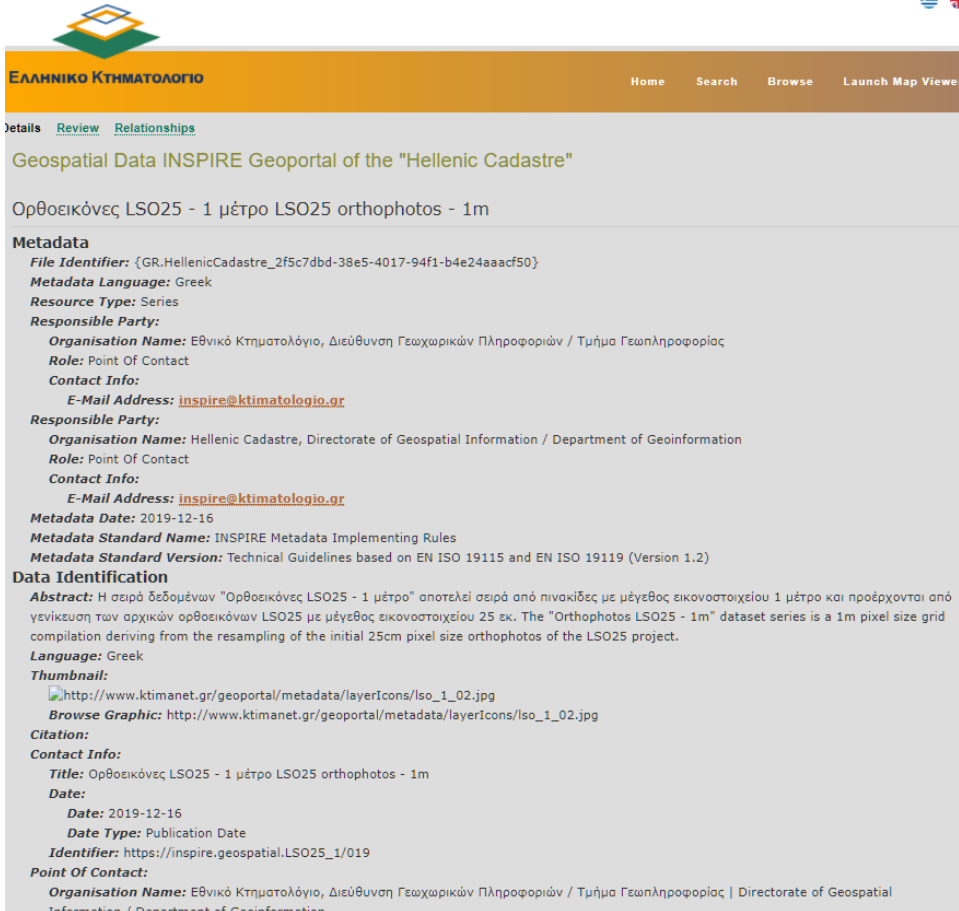


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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



The image shows a screenshot of the Hellenic Cadastre INSPIRE Geoportal interface. The header includes the logo of the Hellenic Cadastre (ΕΛΛΗΝΙΚΟ ΚΤΗΜΑΤΟΛΟΓΙΟ) and navigation links: Home, Search, Browse, and Launch Map Viewer. Below the header, there are tabs for Details, Review, and Relationships. The main content area displays the title "Geospatial Data INSPIRE Geoportal of the 'Hellenic Cadastre'" and the description "Ορθοεικόνες LSO25 - 1 μέτρο LSO25 orthophotos - 1m". The Metadata section provides detailed information about the dataset, including the File Identifier, Metadata Language (Greek), Resource Type (Series), and Responsible Party (Hellenic Cadastre, Directorate of Geospatial Information / Department of Geoinformation). It also includes the Abstract, Language (Greek), Thumbnail, Browse Graphic, Citation, Contact Info, and Point of Contact.

ΕΛΛΗΝΙΚΟ ΚΤΗΜΑΤΟΛΟΓΙΟ

Home Search Browse Launch Map Viewer

Details Review Relationships

Geospatial Data INSPIRE Geoportal of the "Hellenic Cadastre"

Ορθοεικόνες LSO25 - 1 μέτρο LSO25 orthophotos - 1m

Metadata

File Identifier: {GR.HellenicCadastre_2f5c7dbd-38e5-4017-94f1-b4e24aaacf50}

Metadata Language: Greek

Resource Type: Series

Responsible Party:

Organisation Name: Εθνικό Κτηματολόγιο, Διεύθυνση Γεωχωρικών Πληροφοριών / Τμήμα Γεωπληροφορίας

Role: Point Of Contact

Contact Info:

E-Mail Address: inspire@ktimatologio.gr

Responsible Party:

Organisation Name: Hellenic Cadastre, Directorate of Geospatial Information / Department of Geoinformation

Role: Point Of Contact

Contact Info:

E-Mail Address: inspire@ktimatologio.gr

Metadata Date: 2019-12-16

Metadata Standard Name: INSPIRE Metadata Implementing Rules

Metadata Standard Version: Technical Guidelines based on EN ISO 19115 and EN ISO 19119 (Version 1.2)

Data Identification

Abstract: Η σειρά δεδομένων "Ορθοεικόνες LSO25 - 1 μέτρο" αποτελεί σειρά από πινακίδες με μέγεθος εικονοστοιχείου 1 μέτρο και προέρχονται από γενίκευση των αρχικών ορθοεικόνων LSO25 με μέγεθος εικονοστοιχείου 25 εκ. The "Orthophotos LSO25 - 1m" dataset series is a 1m pixel size grid compilation deriving from the resampling of the initial 25cm pixel size orthophotos of the LSO25 project.

Language: Greek

Thumbnail:

http://www.ktimanet.gr/geoportal/metadata/layerIcons/lso_1_02.jpg

Browse Graphic: http://www.ktimanet.gr/geoportal/metadata/layerIcons/lso_1_02.jpg

Citation:

Contact Info:

Title: Ορθοεικόνες LSO25 - 1 μέτρο LSO25 orthophotos - 1m

Date:

Date: 2019-12-16

Date Type: Publication Date

Identifier: https://inspire.geospatial.LSO25_1/019

Point Of Contact:

Organisation Name: Εθνικό Κτηματολόγιο, Διεύθυνση Γεωχωρικών Πληροφοριών / Τμήμα Γεωπληροφορίας | Directorate of Geospatial Information / Department of Geoinformation

Functions

- Search for data sets
- Browsing
- Viewing (map projection)
- Access and use of the data through wms and wfs services
- Download services
- Documentation (metadata)

Indicative excerpt of the metadata about the 1m color orthophotos of the country



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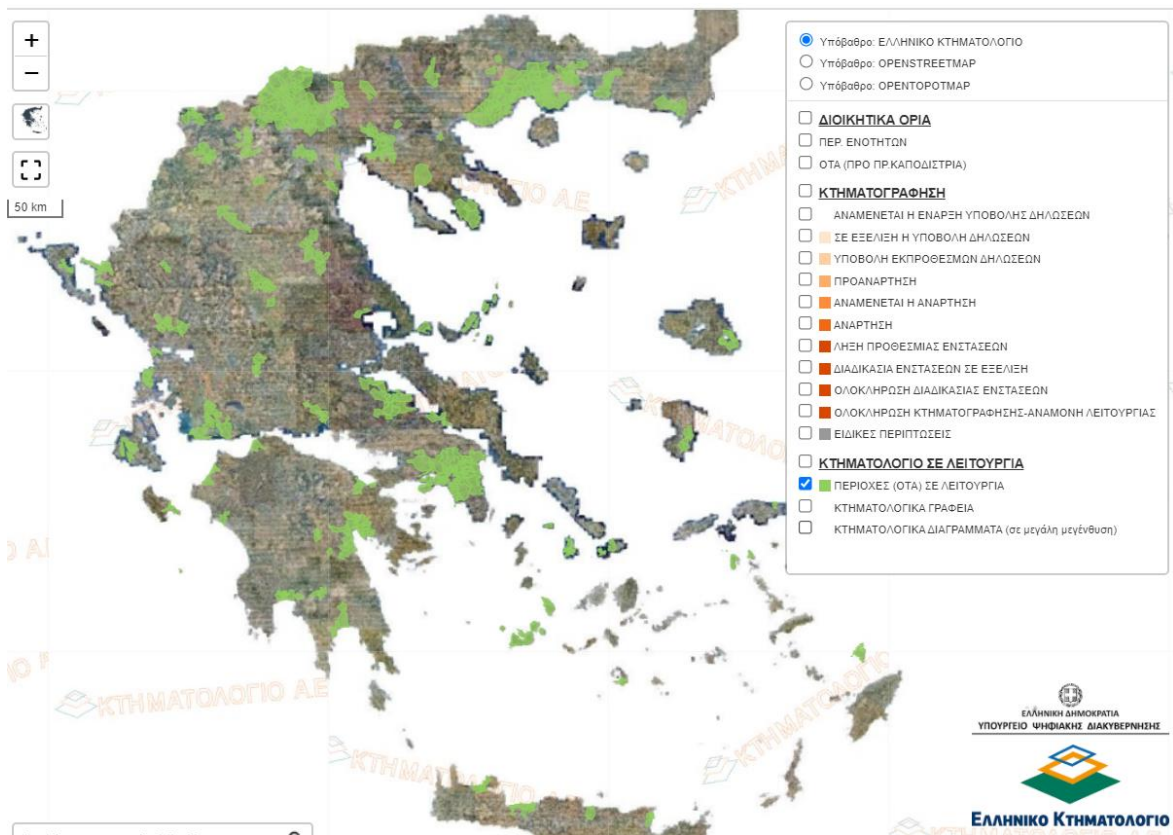
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The INSPIRE Geoportal of the Hellenic Cadastre

Functions and services of the Geoportal



Areas of the country in which cadastre is in full operation (green areas)

Functions

- Search for data sets
- Browsing
- Viewing (map projection)
- Access and use of the data through wms and wfs services
- Download services
- Documentation (metadata)
- Auxiliary



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The INSPIRE Geoportal of the Hellenic Cadastre

Additional data sets served by the INSPIRE Geoportal



Digital Elevation Model (1m GSD, 2014-2015)

- **Coordinate reference system (GGRS '87, TM projection)**
- **Geographical grid system (1:2.500 tile distribution)**
- **Orthophotos, GSD 1m, B&W, countrywide 1945 (viewing)**
- **Orthophotos, GSD 0,20m, color, urban centers, 2007-2009, (viewing)**
- **Orthophotos, GSD 0,50m, color, countrywide, 2007-2009, (viewing)**
- **Orthophotos GSD 0,25m, color, 2014-2015, countrywide, (offline)**
- **Orthophotos GSD 0,50m, color, 2014-2015, countrywide (viewing)**
- **Orthophotos GSD 1,0 m, color, 2014-2015, countrywide (offline)**
- **DSM, 0,80 m, urban areas, 2007-2009, (offline)**
- **DEM, 5m countrywide, 2007-2009 (offline)**
- **DEM, 2 m countrywide 2014-2015 (offline)**
- **DEM, 25 m countrywide 2014-2015 (offline)**
- **Municipality boundaries, countrywide (full functionality)**
- **Cadastral sectors and sections (full functionality)**
- **Ratified forest maps (full functionality, but no data yet)**
- ...



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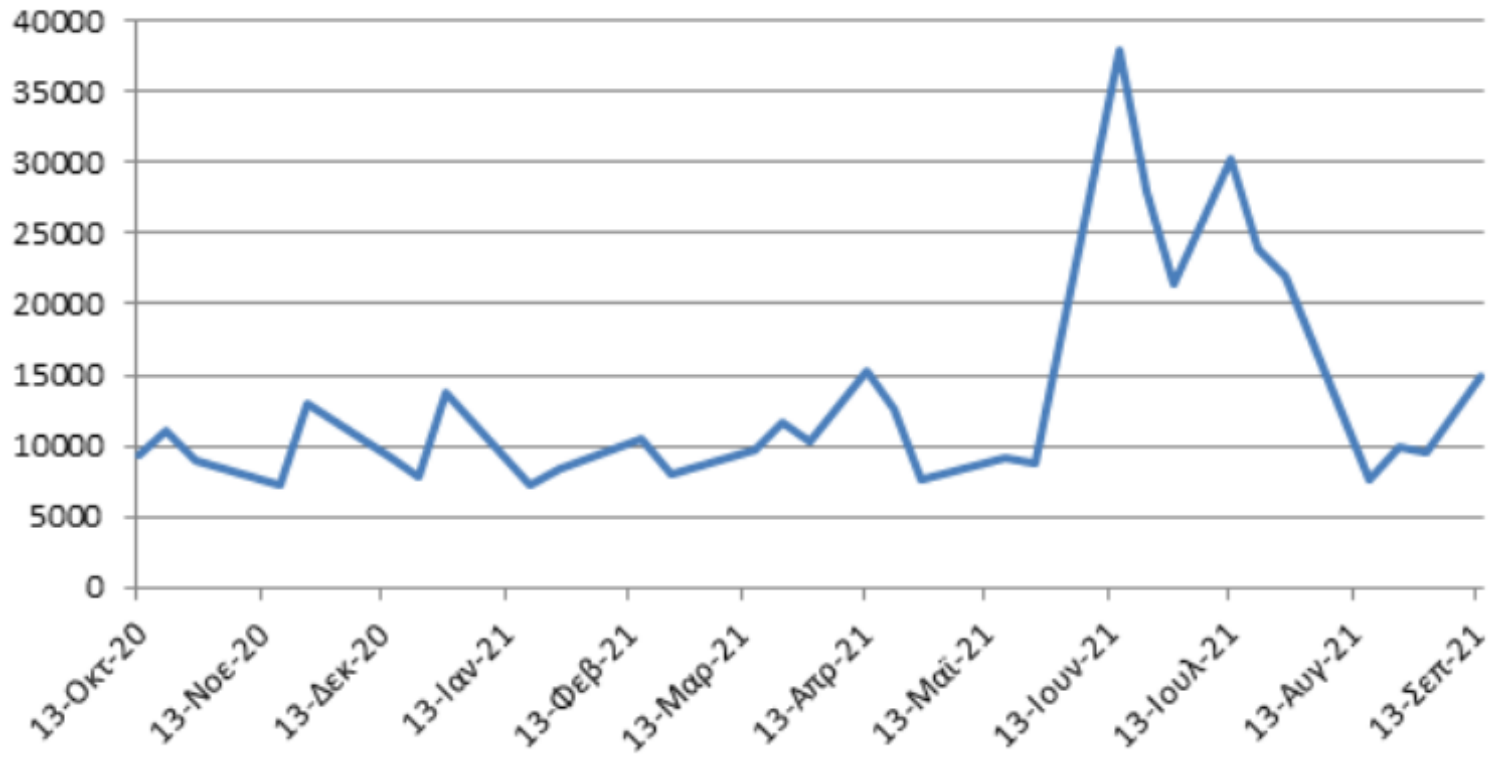
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Use of the INSPIRE Geoportal



**WMS connections of the INSPIRE Geoportal during the period Oct. 2020 through Sept. 2021
(connections per day)**



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The INSPIRE Geoportal of the Hellenic Cadastre

Future plans

INSPIRE GEOPORTAL
Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal

Home | Priority Data Sets Viewer | Thematic Viewer | Harvesting status | Find out more about

INSPIRE Data Themes
Explore all Member States' INSPIRE data sets by selecting an INSPIRE data theme.

Annex I

- Addresses**
— Def.: Location of properties based on address identifiers, usually by road name, house number, postal code.
323 | 45 | 124
- Administrative units**
— Def.: Units of administration, dividing areas where Member States...
820 | 90 | 243
- Cadastral parcels**
— Def.: Areas defined by cadastral registers or equivalent.
7952 | 79 | 56
- Geographical grid systems**
— Def.: Harmonised multi resolution grid with a common point of origin...
139 | 18 | 10
- Geographical names**
— Def.: Names of areas, regions, localities, cities, suburbs...
1202 | 77 | 87
- Hydrography**
— Def.: Hydrographic elements, including marine areas and all other water bodies and items related...
1276 | 247 | 223
- Protected sites**
— Def.: Area designated or managed within a framework of international, Community and Member States' ...
1254 | 353 | 375
- Coordinate reference systems**
— Def.: Systems for uniquely referencing spatial information in...
154 | 20 | 12
- Transport networks**
— Def.: Road, rail, air and water transport networks and related ...
1784 | 346 | 540

Annex II

- Elevation**
— Def.: Digital elevation models for land, ice and ocean surface...
858 | 91 | 233
- Geology**
— Def.: Geology characterised according to composition...
1222 | 235 | 308
- Land cover**
— Def.: Physical and biological cover of the earth's surface...
926 | 185 | 201
- Orthoimagery**
— Def.: Geo-referenced image data of the Earth's surface, from either...
1119 | 62 | 104

INSPIRE Data Themes (Annexes I και II) (https://inspire-geoportal.ec.europa.eu/theme_selection.html?view=qsTheme)



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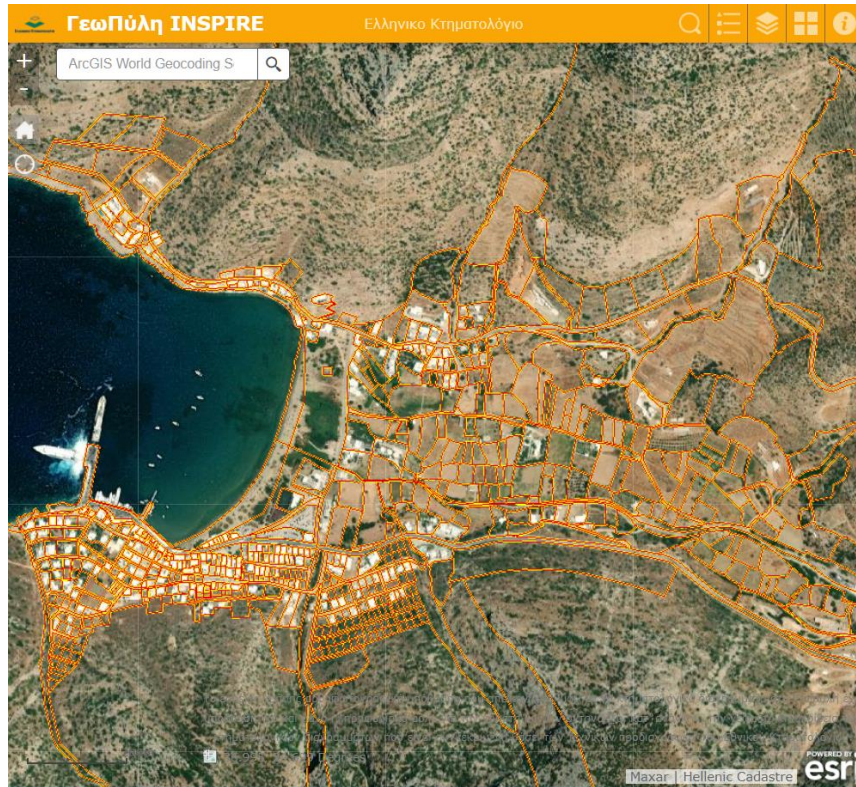
Enrich the Geoportal with additional datasets

- Thematic attributes of cadastral parcels (addresses, land uses...)
- Imagery (*consent by Defense Min.*)
- Elevation data (*consent by Def. Min.*)
- Protected sites (*forest maps*)
- Administrative boundaries
- Geographical names
- Land uses
- Addresses
- Buildings
- Hydrography

The Hellenic Cadastre has the potential to contribute to 14 out of the 34 main INSPIRE Data Themes.



Summary and conclusions



Cadastral map of a coastal area as it is depicted in the INSPIRE Geoportal of the Hellenic Cadastre

The INSPIRE Geoportal of the Hellenic Cadastre comprises a first step towards unleashing countrywide geospatial data in Greece.

The beginning was made by delivering cadastral map data and providing the full range of services specified by the INSPIRE Directive

The intention is to enrich further the Geoportal by adding new data sets (primarily data described in the INSPIRE's Annexes I and II)

The ultimate goal is to ensure that society takes full advantage of the data and services that exist in the Hellenic Cadastre.

Acknowledgements

This presentation has been benefited from several colleagues in the Hellenic Cadastre. Particular attributions are due to Mr. **Emmanuel Papoutsakis**, Head of the Georinformation Division, and Mrs. **Hara-Maria Papadakis**, a geoinformation specialist in that Division, who have contributed substantially in the development of the Geoportal and are in charge of its operation and maintenance. The Geoportal was developed by **GeoSet Ltd** (Holargos, Greece) through a contract that was procured to it. The financing of the development was made through **EU OP EPAnEK 2014-2020**. The views presented here represent the author and don't necessarily reflect the official views of the "Hellenic Cadastre".



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