

# GEOSPATIAL DATA AND SERVICES TO SUPPORT THE UN AGENDA 2030 IMPLEMENTATION: HUNGARIAN ACTIVITIES



# The UN 2030 agenda for sustainable development

Milestones of of the four decades follow-on actions on the way toward the UN 2030 Agenda. A decision on the Sustainable Development Goals building upon and representing continuation of the Millennium Development Goals was adopted at the Rio+20. The UN worked together with governments, the scientific community and the civil society to develop the post 2015 agenda for sustainable development.

| <b>Actions</b>  | <b>Location, date</b> | <b>Features</b>   |
|---|-----------------------|---|
| <b>UN Conference on Human Environment</b>                             | Stockholm, 1972       | Formulating the concerns, 113 countries   |
| <b>UN World Commission on Environment &amp; Development</b>           | Geneva, 1983          | Established by the UN General Assembly<br>Getting a political mandate                 |
| <b>Our Common Future</b>  | New York, 1987        | Definition of SD, Adopted by the UN GA  |
| <b>Earth Summit, UN Conference on Environment &amp; Development</b>   | Rio de Janeiro, 1992  | Rio Declaration on ED with 27 principles<br>Agenda 21 with 40 chapters, 178 countries |
| <b>The Millennium Summit</b>  | New York, 2000        | 8 Millennium Development Goals, 2015,<br>189 countries                                |
| <b>World Summit on Sustainable Development</b>                        | Johannesburg, 2002    | Role of EO, GI and their technologies   |
| <b>Rio +20 Conference<br/>Earth Summit on Sustainable Development</b> | Rio de Janeiro, 2012  | The Future We Want – common vision.<br>EO/GI and their technologies 192 countries     |

# The role of geospatial and earth observation communities

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- ❑ Implementation of the UN 2030 Agenda provides opportunities and involves responsibilities not only for governments but also for custodians and stakeholders of a wide range of world communities including the Earth Observations and geospatial ones.
- ❑ The data, infrastructures, services and related technologies provide documentaries recording and monitoring of the SDGs' targets and indicators, and they also offer cost-effective, transparent and verifying methods to support the statisticians and decision.
- ❑ Disaggregated by geographic location, this is why the role of earth observation and GI data and spatial data infrastructure with the related services and technologies are significantly upgraded.
- ❑ This generates impacts on national-level strategy formulation, improves data policies, capacity building and needs for interdisciplinary/multi-agency coordination and collaboration, including public-private cooperation.

# Supporting international organisations

| Items  | Examples  |
|--|---|
| <b>Some Earth Observation international institutions</b>     | <p><b>GEO</b>, Intergovernmental Group on Earth Observation, 105 countries 118 members</p> <p><b>EO4SDGs</b>, GEO Earth Observations for the Sustainable Development Goals</p> <p><b>CEOS</b>, Committee on Earth Observation Satellites</p> <p><b>ISDE</b>, International Society of Digital Earth etc.</p>  |
| <b>EO/GI programs of space agencies</b>                      | <p><b>ESA</b> (Copernicus, Galilei, ESA Earth Observation Data), NASA, USGEO etc.</p>   |
| <b>UN and SDG-related bodies</b>                             | <p><b>ECOSOC</b>, UN Economic and Social Council</p> <p><b>UNSTAT</b>, UN Statistics Division</p> <p><b>UN-GGIM</b>, Global Geospatial Information Management, UN Committee of Experts</p> <p><b>Data4SDGs</b>, Global Partnership for Sustainable Development Data</p> <p><b>IAEG-SDG</b>, Inter-Agency Expert Group on SDG indicators</p> <p><b>IISD</b>, International Institute for Sustainable Development</p> <p><b>SDSN</b>, Sustainable Development Solutions Network</p> <p><b>HLG-PCCB</b>, High-level Group for Partnership, Coordination and Capacity-Building for statistics for the UN Agenda 2030, UN Statistical Commission</p> <p><b>HLPF</b>, UN High-level Political Forum on Sustainable Development etc.</p> |
| <b>Global Geospatial Societies/Organisations</b>             | <p><b>FIG</b>, International Federation of Surveyors</p> <p><b>ISPRS</b>, International Society of Photogrammetry and Remote Sensing</p> <p><b>ICA</b>, International Cartographic Association</p> <p><b>IAG</b>, International Association of Geodesy</p> <p><b>ISO-TC211</b>, International Standard Organization, Technical Committee</p> <p><b>OGC</b>, Open Geospatial Consortium</p> <p><b>GSDI</b>, Global Spatial Data Infrastructure etc.</p>  |
| <b>Regional frameworks, programs and alliances in Europe</b> | <p><b>INSPIRE</b>, <b>Danube Region Strategy</b>, <b>EuroGeographics</b>, <b>UNECE WPLA</b>, <b>EUROGI</b>, <b>EuroSDR</b>, <b>GEE-See</b>, <b>EULIS</b> etc.</p>   |

# Hungarian institution and legal background for sustainable development

Hungary has developed a complex, well-balanced institution and legal system for the implementation of sustainable development laws and policies, including international agreements.

| Institutions in Hungary                             | Roles, rights and responsibilities  |
|---|---|
| <b>National Assembly</b>                            | Adopting: (a) Constitution with some SD requirements (2011), (b) SD framework strategy (2013), (c) other SD relevant laws (on-going).   |
| <b>President of the Republic</b>                    | Representing and advocating the commitment to sustainable development within the country and at the international level; Taking part in awareness raising. Dedicated Directorate for Environmental Sustainability assists the Office of President.  |
| <b>National Council for Sustainable Development</b> | Elaborating the national framework strategy on sustainable development; Preparing biennial progress reports on SD in Hungary (including the UN SDG's); Participating in awareness raising; giving opinion on draft rules of law affecting sustainability. Independent, Parliament-based Multi-stakeholder council established by the National Assembly. |
| <b>Ombudsman for Future Generations</b>             | Ensuring effective and coherent protection of constitutional rights; Acting as a policy advocate for sustainability; Investigating the complaints; Initiating review of rules at the Constitutional Court.  |
| <b>Constitutional Court</b>                         | Reviewing of laws upon petition; Annulling objected laws if found being contrary to the Constitution (SD, concept of the rights of future generations is laid down in the Constitution).  |
| <b>Government, State-managed institutes</b>         | Setting policies and regulations in order to implement all goals of international agreements, national strategies and Constitution regarding the SD.  |
| <b>Central Statistical Office</b>                   | Data collection, maintaining and publishing the SD database; Publishing biannually a report on implementation of SD (SD-Indicators HU, 2016); Managing UN and EU SD indicators.   |

# Legal system, laws and strategies

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- The effective Constitution (Fundamental Law) of Hungary was adopted in 2011. This basic document declares fundamental rights and commitments concerning all of the human, social, environmental, and economic dimensions of sustainable development.
- The first National Sustainable Development Strategy of Hungary was accepted by the government in 2007. The main objective of the NSDS was to help shift domestic social, economic, and environmental processes, taking into account both domestic realities and external and global processes and conditions.
- After the establishment of the National Council for Sustainable Development by the National Assembly in 2008, the Parliament also adopted a decree on the renewing process of NSDS.
- In March 2013, the Hungarian Parliament adopted the new National Framework Strategy on Sustainable Development for the period 2012-24. Although the new framework strategy was adapted earlier than the UN Agenda 2030, the Hungarian national SD framework strategy is containing all relevant implementation linkages to the SDGs.
- Besides the well-balanced institution and legal system for the implementation of sustainable development, there are deficiencies (1) in regulating the Hungarian implementation of the UN Agenda 2030 SDGs tasks at a level of executive decree (2) and in using the EO and GI for Hungarian monitoring the sustainable development, in general.

# Earth observation and GI related sustainable development framework activity

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During the last period, different events have been arranged in Hungary connected with the 2030 Agenda on the Sustainable Development:

- The Plenary Meeting of the Executive Committee of the UN GGIM: Europe was held in Budapest, 5 October 2016.
  - From Hungary, the Department of Land Administration and Geo-information of the Ministry of Agriculture (which is the prime geospatial data provider in Hungary),
  - the Hungarian Central Statistical Office,
  - from abroad the UN-GGIM Secretariat, EuroGeographics, GSDI, EUROGI, and UNECE representatives joined the Meeting.
- An SDGs-related conference was arranged by the National Council for the Sustainable Development in cooperation with the Hungarian Society of Conservationists–Friends of the Earth, 7 February 2017 with the aim to identify the progress and setting up tasks to be done, e.g. the amendment of the National Framework on Sustainable Development document.
- The Hungarian National Assembly was the very first that ratified the Paris Agreement on Climate Change in 2016 paving the way for the elaboration of the 2nd National Strategy on Climate Change.

# Hungarian authorities

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The supervisory authority in the field of geodesy, surveying, mapping, remote sensing, land administration, geo-information and earth observation is the Department of Land Administration and Geo-information of the Ministry of Agriculture. This official portal (<http://www.foldhivatal.hu>) well represents all its tasks, intercommunications, references and institutions. Its institutions:

- Since 1 January 2017, the successor of FÖMI, providing a wide range of reference framing, mapping, land data, GI, spatial data infrastructure, remote sensing and Earth observation nation-wide services for users from citizens to private sector and from governmental agencies to academia in national and international context is the Department of Surveying, Remote Sensing and Land Offices at the Budapest Capital Government Bureau.
- Services provided on sub-national level in surveying and land issues are performed by Land offices at the County Government Bureaus and the District Bureaus.
- Military mapping and geospatial information management fall within the competency of Geoinformation Service of the Home Defence Forces.
- Hungarian Space Office at the Ministry of National Development supervises the space research programs and major projects in Earth Observation and has wide range of international relations in EU and beyond with special emphasis on cooperation with national/regional space agencies (e.g. ESA) and intergovernmental organizations such as GEO and UN bodies.



**FÖLDÜGY FÖLDHIVATALI PORTÁL**

OFFICIAL PORTAL OF THE HUNGARIAN LAND ADMINISTRATION

LAND OFFICE ADDRESS LIST TAKARNET search...

### Main Menu

- Home
- Mission and Vision
- MoA DLAG
- Land Offices
- Data Service Point
- TakarNet Information
- Land Office Online
- TakarNet24 project

### Latest News

- MoA Department name has changed
  - MoA Department name has changed
  - Integration of FÖMI
  - Names have changed again
  - Name of the Department changed
  - Data Service Point

### The Expert's View

- It all started twenty years ago
  - LADM is now an ISO standard
  - Enslavement
  - 28. Working Meeting
  - A Memorial Place for Land Surveyors

### MoA Department name has changed

11 May 2017

The new Organisational and Operational Rules of the Ministry of Agriculture No. 1/2017 (IV. 28.) has changed the name of the Department of Land Administration, it received back its previous name again. The new-old name is **Department of Land Administration and Geoinformation**, which was the original name of the department. The Department's scope of activity stayed unchanged.

### Integration of FÖMI

26 January 2017

According to the Hungarian Government's Decree No. 1312/2016. (13. June) the Institute of Geodesy Cartography and Remote Sensing (as it is known FÖMI) lost its economically independent status and was integrated into the Government Office of the Capital City Budapest from the 1st of January 2017. FÖMI, the national institution of our profession was established by the Ministry of Agriculture in 1967 as a background institution of the Ministry. As a result of this organisational integration FÖMI continues its professional activities within the organization framework of the Government Office of the Capital City Budapest as the Department of Geodesy, Remote Sensing and Land Offices under the professional supervision of the Ministry of Agriculture, Dept of Land Administration. Government Office of the Capital Budapest is the legal successor of FÖMI.

### It all started twenty years ago

30 January 2013

We are celebrating a significant anniversary. Mr. Robin McLaren, Director of Know Edge Ltd. (Edinburgh, Scotland, United Kingdom) started his activity in Hungary twenty years ago, in September 1992 within the framework of the PHARE Aid Programme of the European Union. His firm won the tender announced for the technical assistance of the multi-annual computerisation programme of the Hungarian land registration network. It consisted of many component projects and involved significant elements of organisational and business change. The beneficiary of this most expensive and complex programme was the supervising authority, Ministry of Agriculture and Rural Development. Robin celebrated the anniversary with the former Hungarian colleagues in Budapest over dinner on the Danube. Ms. Maria Tolth worked as the project assistant in those years, and she interviewed him on this occasion.

[ More... ]

### LADM is now an ISO standard

11 December 2012

The Land Administration Domain Model (LADM) was approved as ISO Standard. The approval is a big step towards the quality of

### Who is here?

### Link to Partners

- Ministry of Agriculture
- FÖMI
- MePAR
- GNSNet

### Public Administration

- Government
- Government Portal
- EU Funds
- ARDA
- National Food Chain Office

### Professional Bodies

- MFTTT
- HUNAGI
- FIG
- EuroGeographics
- PCC - EuroCadastré

### Data Service

- Land Registry Data
- Countrywide Data
- geoshop

# Other Hungarian stakeholders

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- Civil professional societies in GI and earth observation are the Hungarian Society of Surveying, Mapping and Remote Sensing, the Hungarian Association for Geo-information (HUNAGI) and a Gita Hungary Society.
- In standardization the Hungarian Standardization Body, Working Group on Geo-informatics played role.
- On market actors of the GI industry (private sector from start-ups up to SMEs):
  - There are many players who will be potentially involved in the achievement of SDGs taking active part in the target and indicator monitoring and/or reporting to the Central Statistical Office, which is the reporting body to the UN.
- Scientific and research labs, academic institutions, R+D workshops and the institutions of the higher education sector (Universities, Colleges) of our GI/EO profession have significant importance in supporting the SDGs' implementation.

# Hungarian Geospatial data and Earth Observations in service of SDGs implementation

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Geospatial and Earth observation data of the Department of Geodesy, Remote Sensing and Land Offices, Government Office of the Capital City Budapest:

- Reference systems.
- Geographical names: Hungarian Gazetteer.
- Administrative boundaries of Hungary.
- Unified National Cadastre (taking care of IT Systems of Unified Land Registry, Farmer's and Land Lease Register, also manage the nation-wide processing of Land Administration Data).
- Topographic maps (raster and vector).
- Elevation data.
- Land cover, CORINE LC series: updates were produced in 2000, 2006, and the latest in 2012.
- Aerial photos and Orthoimagery, 1/3 of the country each year; Digital aerial photo archive online service.
- Land use, partly, see Unified National Cadastre
- Agricultural and aquaculture facilities (per year)
  - Detection and monitoring of damages to agricultural production by using remote sensing
  - GIS Register of Vineyards, VINGIS
  - Hungarian Land Parcel Identification System and Control with Remote Sensing:
    - From 2004 to this day they provide yearly registering and monitoring GI and EO data.
    - LPIS-Hu in numbers, 2017:
      - 451 730 physical blocks, average block size: 20.6 ha,
      - participants: 173 000 farmers, 4100 orthophotos, 26 thematic layers.

# Hungarian Geospatial data and Earth Observations in service of SDGs implementation

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## ➤ National Adaptation Geo-information System (NAGiS)

(<http://nater.mbfisz.gov.hu/en/node/5>)

According to Government Decree on the detailed rules of operation of NAGiS, a multipurpose geo-information system has been built up that can facilitate the policy-making, strategy-building and decision-making processes related to the impact assessment of climate change and founding necessary adaptation measures in Hungary. The NAGiS consists of well detailed, monitored and structured 15 data sets, namely on demography, climate, forestry, land cover, economy, heat waves, drinking water sources, people's attitudes by climate changes, ecology, ecosystem supply indicator, arable lands, effect of extreme weather on road accidents, ground water, touristic climatology and quick floods.

## ➤ National Environmental Information System (OKIR) <http://web.okir.hu>:

The administrative organs performing environmental, conservation, water protection measures and tasks have accumulated a lot of environmental data on the load to environment and the status of the environment. The data collected and processed are entered into a central database operated by the Ministry of Agriculture. This system is the National Environmental Information System.

## ➤ National Regional Development and Country Planning Information System (<https://www.teir.hu/>).

Provides geospatial data and digital maps which serve as basis when planning, realizing and monitoring the developments wished to be sustainable.

# National Adaptation Geo-information System (NAGiS)

The screenshot shows the NAGiS website with the following elements:

- Top Navigation:** Includes logos for 'eea grants' (European Environmental Agency) and 'REGIONAL ENVIRONMENTAL CENTER'. A text box states: 'The Project is supported by a grant from Iceland, Liechtenstein and Norway.'
- Secondary Navigation:** A horizontal menu with buttons for 'Metadata', 'Maps', 'Database', 'Documents', 'Registration', 'About NAGiS', 'Contact', and 'Login'. On the right, there are language options: 'Magyar' and 'English'.
- Main Content Area:**
  - Introduction:** A paragraph describing NAGiS as a multipurpose geo-information system for policy-making and decision-making related to climate change adaptation in Hungary. A link is provided for further information.
  - Article Highlight:** A section titled 'An article on NAGiS published by the European Environmental Agency'. It features a thumbnail image of a document and text describing EIONET, a partnership network of the EEA and its member countries, involving 1000 experts and 350 national institutions. It mentions the collection and dissemination of environmental data. Below this, there is a 'Language' dropdown set to 'English' and a 'Read more Magyar' link.
  - Project Summary:** A section titled 'Climate change and adaptation - a summary of the scientific results of the NAGiS Project'. It includes a thumbnail image of a landscape and text stating that the launch of the NAGiS portal on May 1st, 2016, is a milestone after nearly four years of development. Below this, there is a 'Language' dropdown set to 'English'.
  - Database Feature:** A large image of a forest with a text box titled 'NAGiS Database - the GeoDat'. It explains that calculation results (exposure, sensitivity, potential impact, adaptivity, vulnerability) based on climate change modeling are available in the GeoDat for registered users.
  - Partner Logos:** A grid of logos for 'Társprojektek' (Partner Projects), 'MBFSZ', 'NAK', and 'KLÍMAPOLITIKA'.

# National Environmental Information System (OKIR)



Home

## HOME

Authorities

Decision Register

Environmental Data Browser

**WASTE MANAGEMENT (EHIR)**

**AIR POLLUTANT EMISSIONS (LAIR)**

**SURFACE WATERS (FEVISZ)**

**GROUND WATERS (FAVI)**

**EUROPEAN POLLUTANT RELEASE AND TRANSFER REGISTER (E-PRTR)**

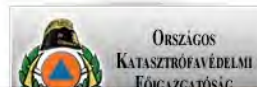
**NATURE CONSERVATION (TIR)**



→ Ministry of Agriculture



→ National Inspectorate For Environment and Nature



## What is OKIR?

The administrative organs performing environmental, conservation, water protection measures and tasks have accumulated ample environmental data on the load to environment and the status of the environment. Some of them are the regional inspectorates' own measurement data, while others come from the data provided by the environment users under statutory regulation. The data are entered to a centralized computer database in such way that the Environment Protection and Nature Conservation Inspectorates, who perform the measurements and process the reported data, transmit the data directly to a central database operated by the Ministry of Agriculture. This system is the National Environmental Information System and OKIR is the acronym of its Hungarian name.

## HUNGARIAN NATIONAL AUTHORITIES

- Ministry of Agriculture
- National Inspectorate For Environment and Nature
- National Directorate General for Disaster Management, Ministry of the Interior

## ACCESS TO ENVIRONMENTAL PROTECTION DATA

- Overview map
- "What's around me?" data browser
- E-PRTR data queries
- Waste management data (EHIR) queries
- Air pollutant emissions (EHIR) queries
- Groundwater quality and remediation data (FAVI) queries
- Surface water quality measurement data (FEVISZ) queries
- Environmental Decision Register

# National Regional Development and Country Planning Information System

Országos Területrendezési Terv övezetei

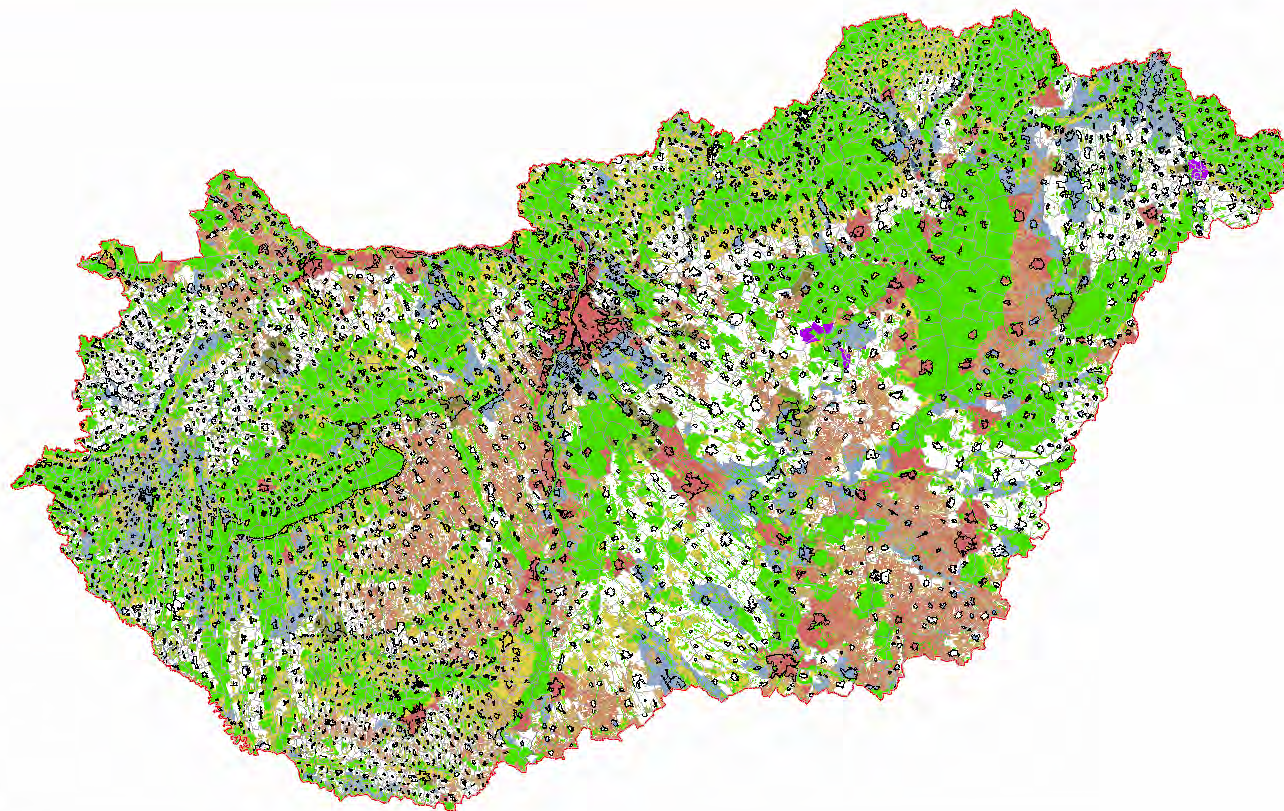
Keresés települénevre | Nyomtatás

1:1 504 475

Results

Map Contents

- Térképi rétegek
  - Alaptérképi elemek
  - Országos ökológiai hálózat
  - Kiváló termőhelyi adottságú s
  - Jó termőhelyi adottságú szánt
  - Kiváló termőhelyi adottságú e
  - Tájképvédelmi szempontból k
  - Világörökségi és világörökség
  - Országos vízminőség védelmi
  - Nagyvízi meder területe
  - Vásárhelyi terv továbbfejleszt
  - Kiemelt fontosságú honvédelm



# Thematic geospatial information systems used in Hungary

Cadastral maps: [www.ftf.bfkh.gov.hu/portal\\_en](http://www.ftf.bfkh.gov.hu/portal_en), [www.geoshop.hu](http://www.geoshop.hu)

The screenshot displays the geoshop.hu website interface. At the top, there is a navigation bar with the 'geoshop' logo, a user login section (Felhasználónév, Belépés, Regisztráció, Jelszóemlékeztető), and a shopping cart icon (Kosár) indicating it is empty. Below the navigation bar, there are tabs for 'Vásárlás', 'Nyitólap', 'Termékeink', 'Árak', 'Kapcsolat', 'Segítség', and 'Kérdőív'. The main content area is divided into several sections:

- 1. Termék kiválasztása**
- 2. Terület kiválasztása**: This section includes a dropdown for 'Segédretek kiválasztása:' set to 'Légifelvételek'. Below this are buttons for '+', '-', '↑', '↓', 'WFS', and 'WMS'. A list of 'Légifelvételek' shows 'Ortofotó 2011-14 (2m/px)'. A checkbox for 'Légifelvétel tif+tfw' is checked. A 'Tovább' button is at the bottom.
- 3. Terület ellenőrzése**
- 4. Kosár**
- 5. Pénztár**

The central part of the interface features a map with several red location markers. A tooltip is displayed over one of the markers, providing the following information:

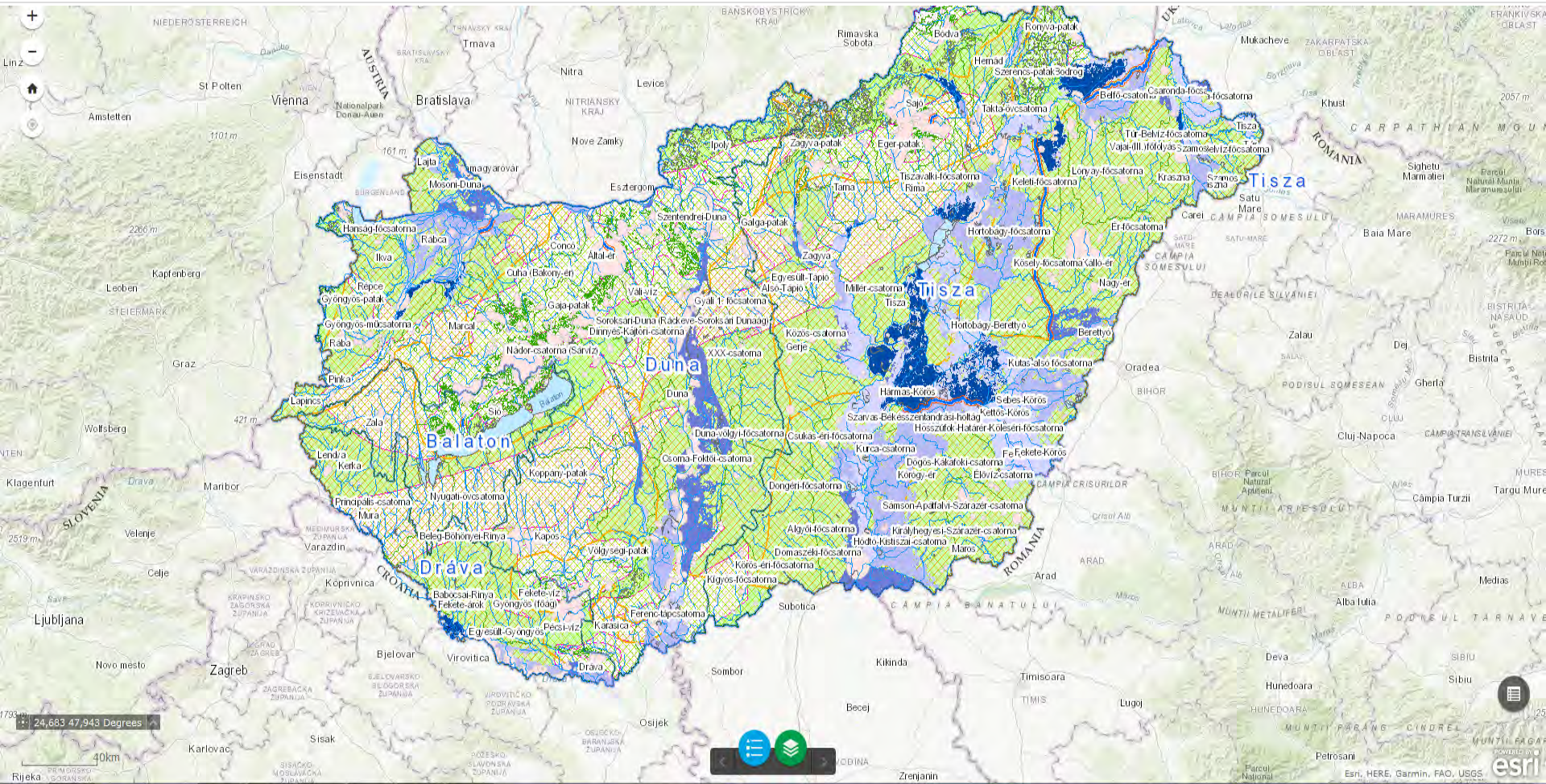
- Készült: 1967. április 12.
- Képszám: 9480
- Filmszám: 1967-0014
- Képméret: 23cm
- Repülési magasság: 2300m
- Fotográfiai minőség: megfelelő
- [Bővebben](#)
- [Kosárba](#)

At the bottom of the map, the coordinates 'EOV 686160, 290003' and the scale 'M = 1 : 22677' are shown. Below the map, there are links for 'Általános szerződési feltételek', 'Adatvédelmi nyilatkozat', and 'Adatvédelmi elveink'. The footer contains the logo of the Budapest Főváros Kormányhivatala and the logo of the Nemzeti Földügyi Ügyek Igazgatósága (NFÜ).



# Thematic geospatial information systems used in Hungary

Water management: <http://geoportal.vizugy.hu/inspire/>



# Thematic geospatial information systems used in Hungary

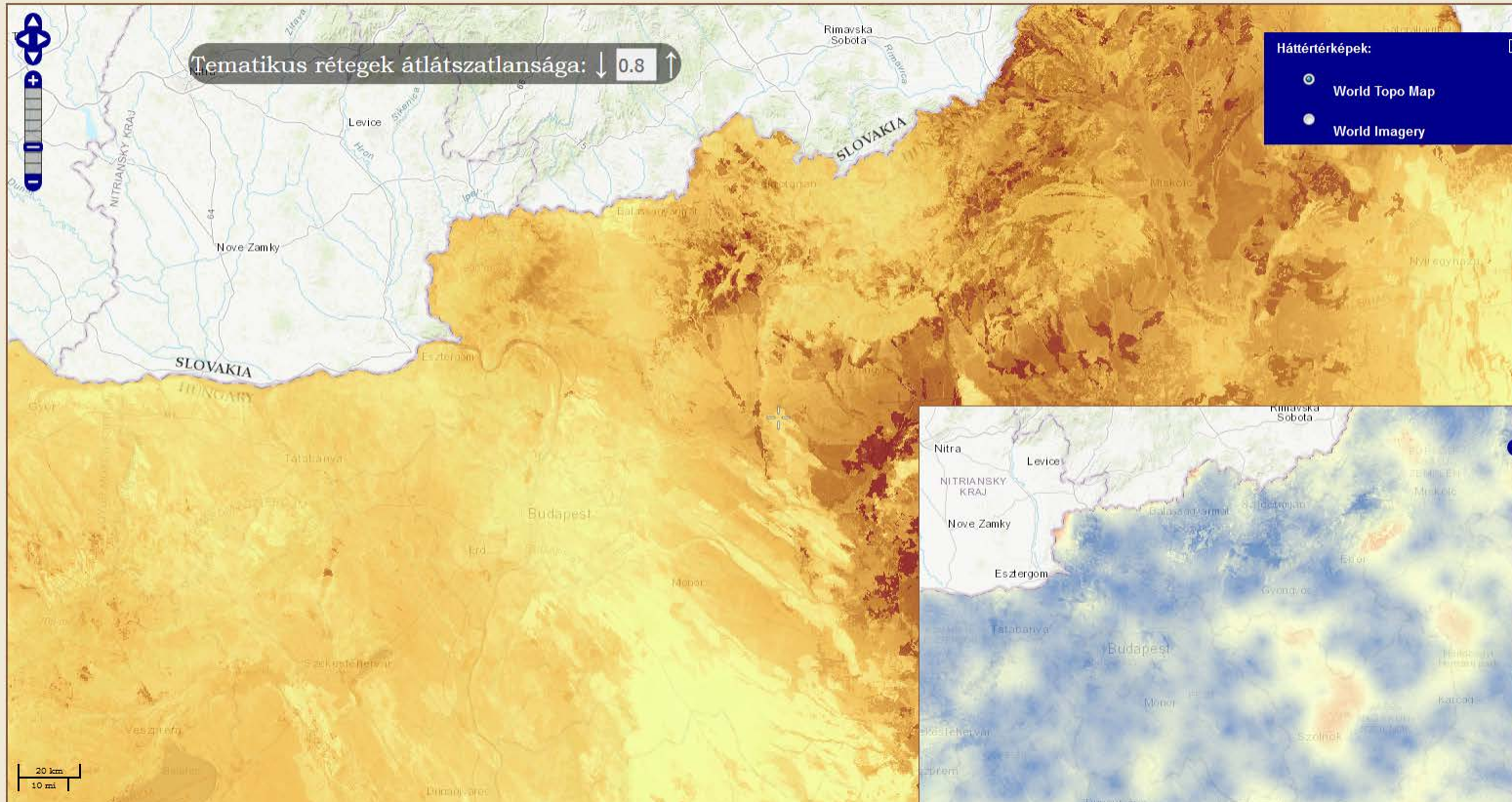
Soil cover of Hungary: <http://www.dosoremi.hu>

Vissza a főoldalra

Tematika választás



Agyagtartalom



Mélység: 30-60 cm

Mértékegység: %

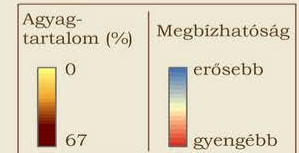
Térbeli felbontás: 100 x 100 m

Referencia adatok: TIM

Környezeti segédváltozók:  
DKTIR, FDT100, EUEDEM25,  
MODIS, OMSZ, textúra 0-30  
cm fedvények

Módszer: kompozit regresszió  
krigelés

A becslés átlagos hibája:  
RMSE = 9,37



# Thematic geospatial information systems used in Hungary

Geological maps: <http://www.mbfisz.gov.hu>

*MBFSZ térképek*

RÖLUNK

WEBES TÉRKEPEK

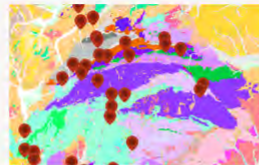
TÉRKÉPSZERVIZEK

KAPCSOLAT



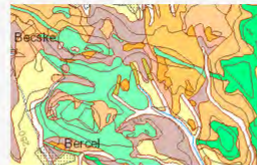
**MAGYARORSZÁG FÜRÁSPONT TÉRKEPE**

1:100 000



**MAGYARORSZÁG FÖLDTANI ALAPSZELVÉNYEI**

1:100 000



**MAGYARORSZÁG FÖLDTANI TÉRKEPE**

1:100 000



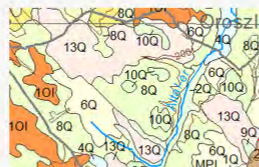
**BUDAPEST GEOKALAUZ**

1:50 000



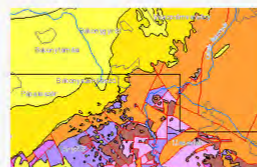
**MAGYARORSZÁG FÖLDTANI ATLASZA**

1:200 000



**MAGYARORSZÁG FÖLDTANI TÉRKEPE**

1:500 000



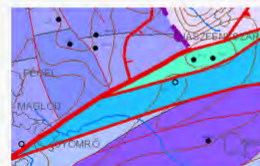
**MAGYARORSZÁG MÉLYFÖLDTANI TÉRKEPE**

1:100 000



**MAGYARORSZÁG MÉLYFÖLDTANI TÉRKEPE**

1:500 000



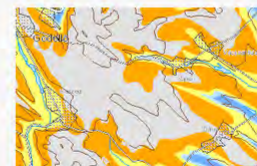
**MAGYARORSZÁG PRE-KAINOZOOS FÖLDTANI TÉRKEPE**



**BUDAPEST ÉPÍTÉSALKALMASSÁGI TÉRKEPE**



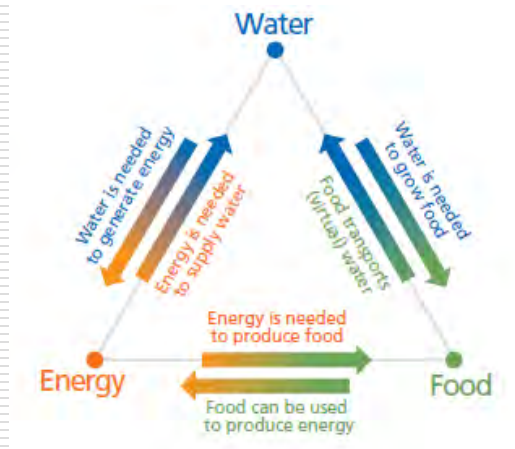
**MAGYARORSZÁG POTENCIÁLIS HULLADÉKLEPRAKÓHELYEI**



**MAGYARORSZÁG TALAJVÍZSZINT MÉLYSÉG TÉRKEPE (0-8M)**

# Follow-on actions

- The envisaged steps towards the achievements of tangible results in the engagement of stakeholders include meeting with experts of the Sustainable Development and Resources Research Centre at the National University of Public Service. The aim is to exchange of information and to discuss the feasibility how Earth observations and geospatial information could support their monitoring.
- Further actions are anticipated with Earth observation experts of the Hungarian Space Office of the Ministry of National Development, where the multi-agency and interdisciplinary project Earth Observation Information System will be supervised. The Hungarian experiences in awareness raising in the 'EO/SDI/GI for SDGs' context with emphasis to support the *Nexus approach* is also considered as contribution to the Manual of Digital Earth of ISDE.



# Missing of Hungarian NSDI is a possible reason for degraded SDGs implementation

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- The purpose of INSPIRE Directive is to lay down general rules aimed at the establishment, management and maintenance of the Infrastructure for Spatial Information in the European Community and of its computerised, Internet-based services, and to establish this infrastructure between 2009 and 2020.
- Harmonisation of the spatial data, their interoperability and the data policy in Hungary is incomplete, therefore, cooperation between the databases may end in problems.
- Hungary does not have a nationally harmonised National Spatial Data Infrastructure. Belonging to several ministries or ministerial back offices, each field manages the data within their own scope of action in accordance with their legal requirements but no rule is in force regarding their harmonization. Further, with the exception of certain data themes, the Hungarian data policy does not allow free data uses at the moment.
- We must establish Hungarian National Spatial Data Infrastructure, one basic element of which are the INSPIRE rules as given above.
- The establishment of such National Spatial Data Infrastructure will allow efficient and coordinated use of the spatial data and the spatial information systems by the Government and different stakeholders (including the private sector and the civil society organizations).

# Conclusions





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- The Hungarian Society of Surveying, Mapping and Remote Sensing and its volunteer members successfully contributed to the implementation of Agenda 2030 SDGs by their 2017 awareness raising campaign executed on different professional forums calling the attention of the Hungarian geospatial community and stakeholders to how their technologies and services can support the national implementation of SDGs in Hungary.
- For future active and effective Hungarian participation in implementation of the Agenda 2030 SDGs, the supportive geospatial and Earth observation data, services and stakeholders are to be involved and utilized in Hungary at a level and enhancement higher than before.

For this reason, different measures are to be taken in Hungary:

- (a) continuation of the engagement of GI and EO stakeholders campaigns,
- (b) strengthening the cooperation with the UN and SDG-related bodies,
- (c) realizing the codification works, i.e. decrees formulated and issued to regulate the GI and EO data services for and stakeholders participation in Hungarian actions of fulfillment of the SDGs,
- (d) measures are needed for proper operation of the national Spatial Data Infrastructure and associated partnerships of the stakeholders of the interlinked sectors,
- (e) these are inevitable to ensure effective and synergetic support by geospatial data and Earth observation integrated with statistical information to achieve the SDG.

# Thank you for your attention

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