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SZÉCHENYI 2020

National Adaptation Geo-information System (NAGiS) project in Hungary

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CGE webinar: Geo-information system-based climate change impact and vulnerability assessment

4 July, 2018



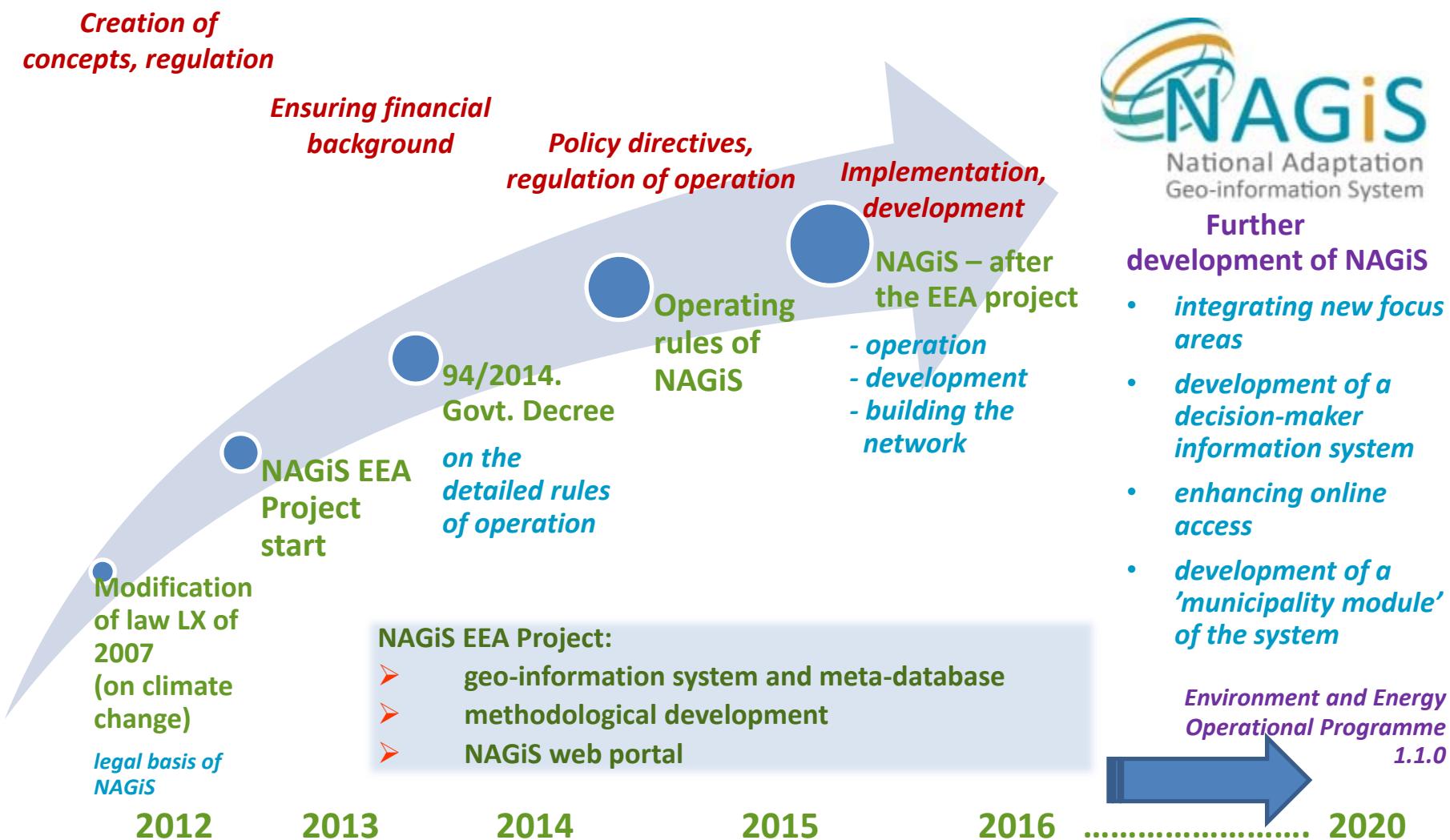
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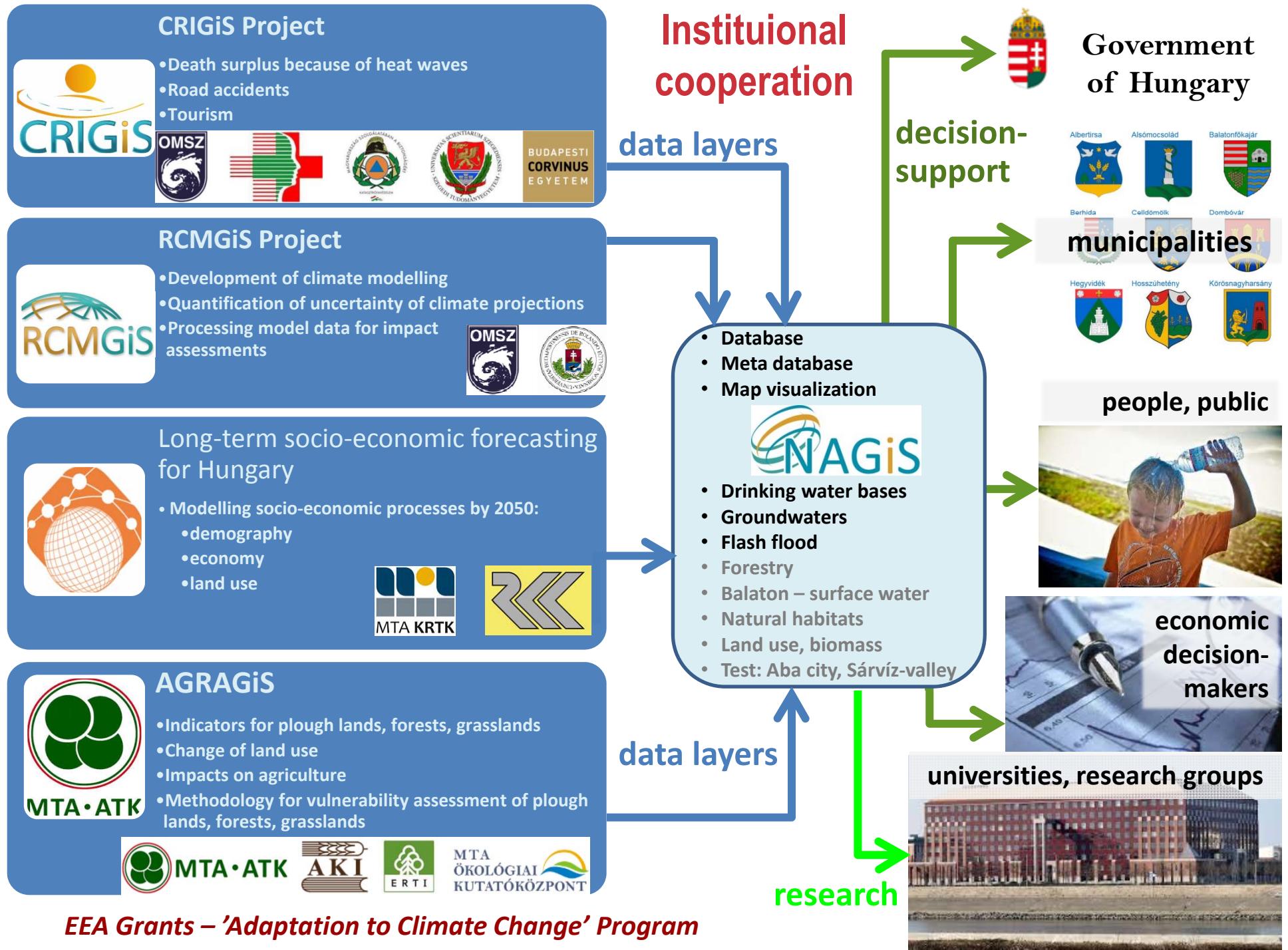
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- 1. Country experiences in setting up institutional arrangements**
- 2. Methodology for vulnerability assessment**
- 3. Information for policy making processes at national / local levels**

Establishing and development of NAGiS according to the regulation







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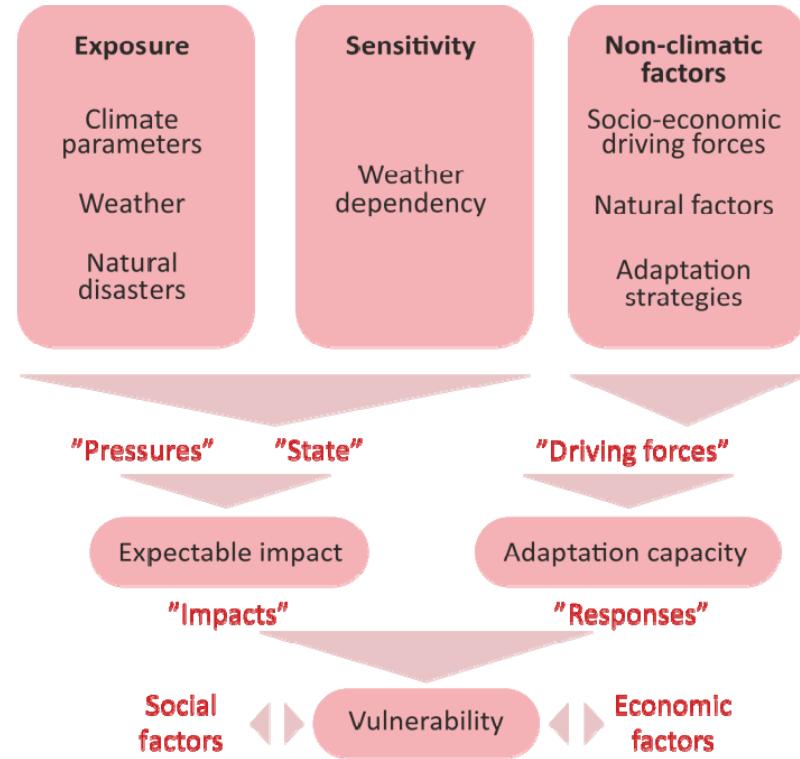


MBFSZ

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Objectives of the NAGiS Project

- Meeting Hungarian climate change regulations
- Developing a methodology for the quantitative analysis of vulnerability
 - *Impact, Exposure, Sensitivity, Adaptation Capacity – CIVAS model**
- Database integration
- Map visualization of results
- Metadata system
- Impact assessments for sectorial and territorial planning
- Dissemination of information



Theoretical structure of the CIVAS model

Source: Climate change and adaptation - a summary of the scientific results of the NAGiS Project (MFGI, 2016), p.14
<http://nater.mbfesz.gov.hu/en/node/45>

* CLAVIER project: Climate Change and Variability: Impact in Central and Eastern Europe EU FP6, GOCE Contract Number: 037013, based on: **Climate Change 2007: Impacts, Adaptation and Vulnerability**. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (eds.: Parry et al.). Cambridge University Press, Cambridge, UK. 976 pp.

Start at: <http://nagis.hu/en>



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The Project is supported by a grant from Iceland, Liechtenstein and Norway.

NATér Metadata Maps Database Documents Registration About NAGiS Contact Login • Magyar • English

The National Adaptation Geo-information System (NAGiS) is a multipurpose geo-information system that can facilitate the policy-making, strategy-building and decision-making process related to the impact assessment of climate change and founding necessary adaptation measures in Hungary.

For further information, click here.

An article on NAGiS published by the European Environmental Agency

EIONET is a partnership network of the European Environment Agency (EEA) and its member and cooperating countries involving approximately 1000 experts and more than 350 national institutions. The network supports the collection and organisation of data and the development and dissemination of information concerning Europe's environment.

Language English

[Read more Magyar](#)

Climate change and adaptation - a summary of the scientific results of the NAGiS Project

The launch of NAGiS portal on 1st May 2016 is an important milestone of a development process started nearly four years ago.

Language English

[Read more Magyar](#)

NAGiS Newsletter - 2016/1-2

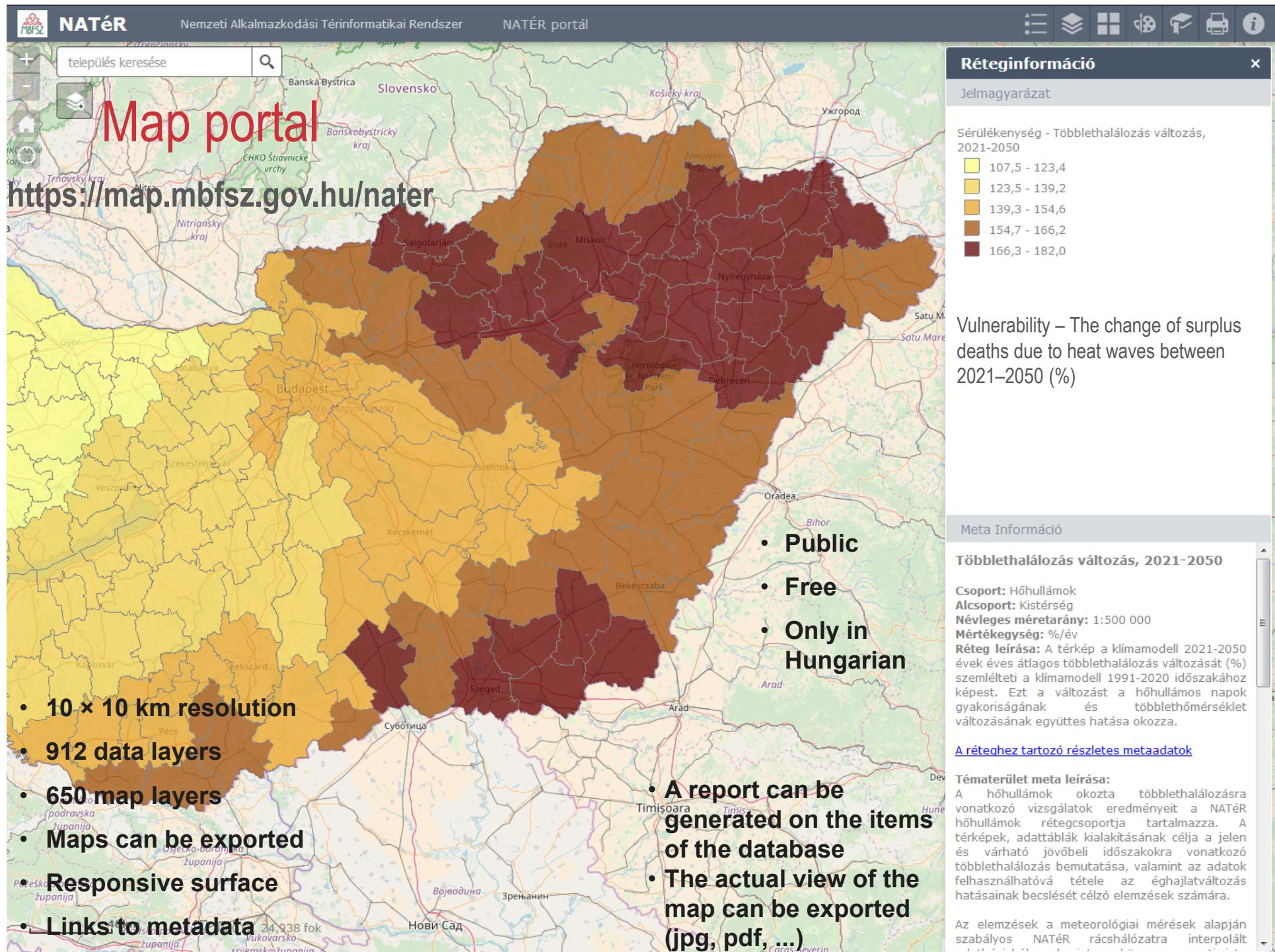
Map visualisation system

A system containing several hundred, 10x10 km resolution map layers, which makes climate change effects in Hungary visible.

Társprojektek MBFSZ NAK KLÍMAPOLITIKA

Units:

- Basic portal
<https://nagis.hu>
- Map portal
<https://map.mbfesz.gov.hu/nater>
- Database portal
<https://nater.mbfesz.gov.hu/geodat>
- Meta-database
<http://nater.mbfesz.gov.hu//hu/metaadat>

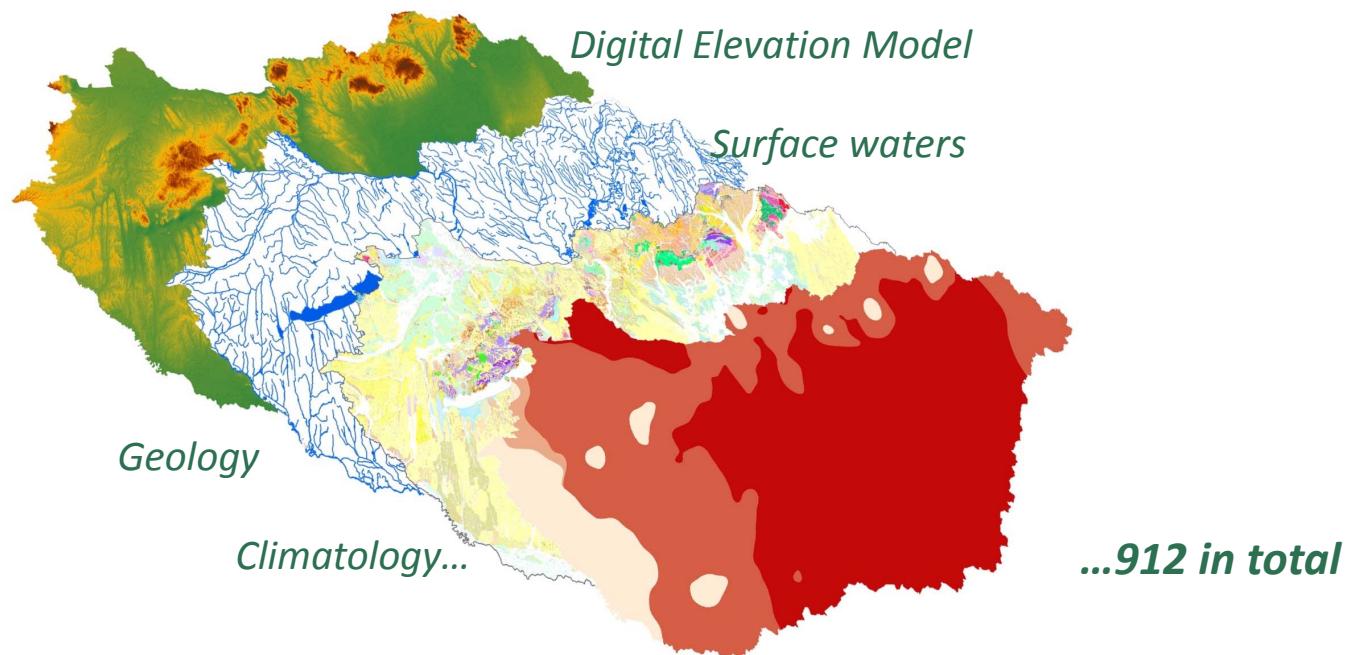


Data layer groups in NAGiS



1. Groundwater table
2. Climate data
3. Climate change
4. Drinking water bases
5. Natural habitats
6. Heat waves
7. Impact of extreme weather on road accidents
8. Demography
9. Economy
10. Land use
11. Climate change attitude of Hungarian people
12. Ecosystem service indicator
13. Forestry
14. Crop production on plough lands
15. Impact of climate change on tourism
16. Flash flood

- **Climate models:**
 - RegCM
 - ALADIN
- **Time windows:**
 - 1961 – 1990
 - 2021 – 2050
 - 2071 – 2100



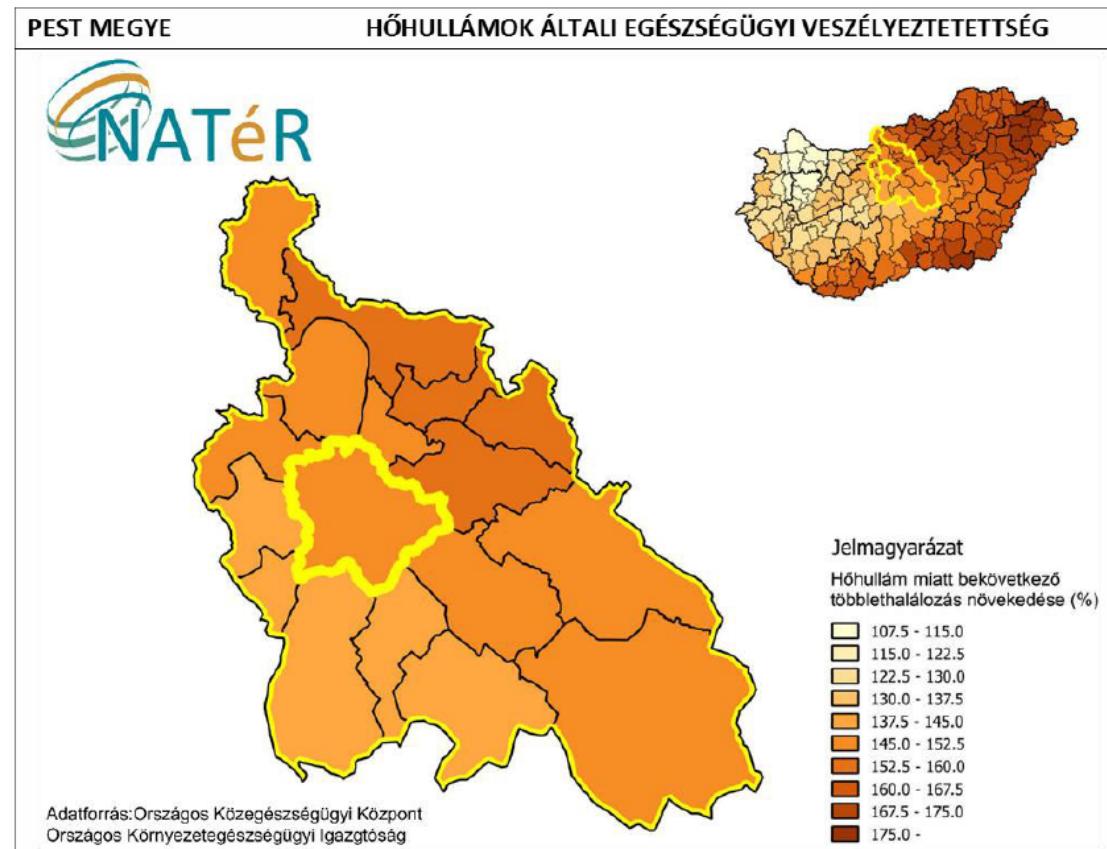
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Uses of NAGiS in national and regional policy making

- Second National Climate Change Strategy of Hungary (NCCS-2)
- Climate Strategy of Pest County, Hungary
- Climate Strategy of Borsod-Abaúj-Zemplén County, Hungary
- Climate Strategy of Hajdú-Bihar County, Hungary
- Testing the NAGiS in the pilot areas Sárvíz River Valley and the region of Aba city
<http://nater.mbfsz.gov.hu/en/node/13>



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Further Development of National Adaptation Geo-information System (2016–2019)



Goals

- Develop the results of NAGiS project
- New climate change exposure layers based on EUROCORDEX database, IPCC AR5, RCP4.5 and RCP8.5
- Elaborate a decision support toolbox to facilitate policy and municipal adaptation measures, based on the development of the databases, methodologies and evaluation modules
- The expected results will help the climate policy and sectoral planning, regional and municipal climate protection strategic planning
- Create new tools elaborated and new information technology modules
- Create a geo-information and policy support system, which is as user friendly as possible and to create spectacular and easy-to-use interfaces

Work packages

- A. Development of tools for sector policies and development policy planning
- B. Development of tools to assist in settlement, district and county municipal planning
- C. Comprehensive, horizontal social policy and economic development analyzes
- D. Methodological developments, dissemination, education, training
- E. Information technology developments



THANK YOU FOR YOUR ATTENTION!

<http://nagis.hu/en>
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