

GeoSphere Austria

Services ranging from the earth interior towards the upper atmosphere

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Directorate

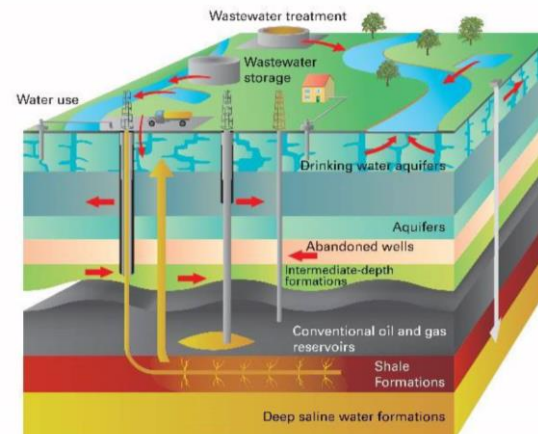
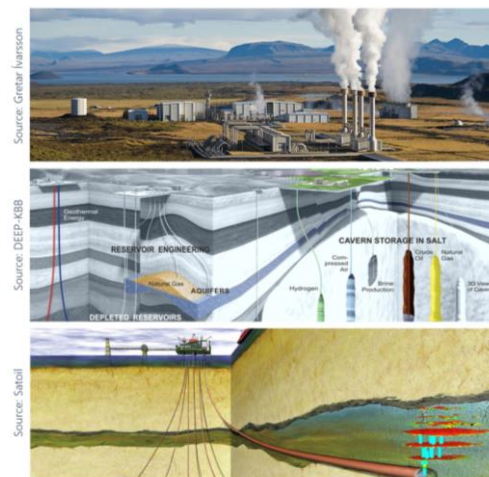
EODC Forum, May 9, 2023

Our society is facing significant challenges

Climate change adaptation and mitigation measures,

- protection of settlement areas and critical infrastructure against more frequent and more severe **extreme weather events and natural hazards**,
- **sustainable mining and production of raw materials**,
- **protection of ground water reservoirs** and utilization of alternative, **renewable sources of energy**

are a prerequisite for all public services, the continued economic stability of our nation as well as for sustainable growth of the economy and ongoing societal development.



How can we address these challenges?

To cope with the various challenges in an adequate way, sufficient **knowledge** about the atmosphere (weather and climate), the earth interior (geology and geophysics) and their various interactions is **absolutely required**.

The indispensable basis for the generation of innovative knowledge of all kinds is the **generation and availability of high-quality data sets**

The general availability of this **knowledge** is a prerequisite for **informed political decision processes** (particularly in the areas of spatial planning, resources production and utilization and civil protection). This is important to **reduce risks and vulnerabilities with regard to natural hazards** and to assure a **sustainable management of resources**.

GeoSphere Austria – important facts



- 340 years of experience combined
- 500 staff members employed
- 9 facilities at 7 different locations in Austria...
- ... including 2 world-class Observatories
- Testing facilities
- Laboratory facilities
- More than 100 currently running projects
- Computer centre including a HPC facility
- More than 50 national and international cooperation activities
- 10.000 references in mass media (2022)
- ... and much more...

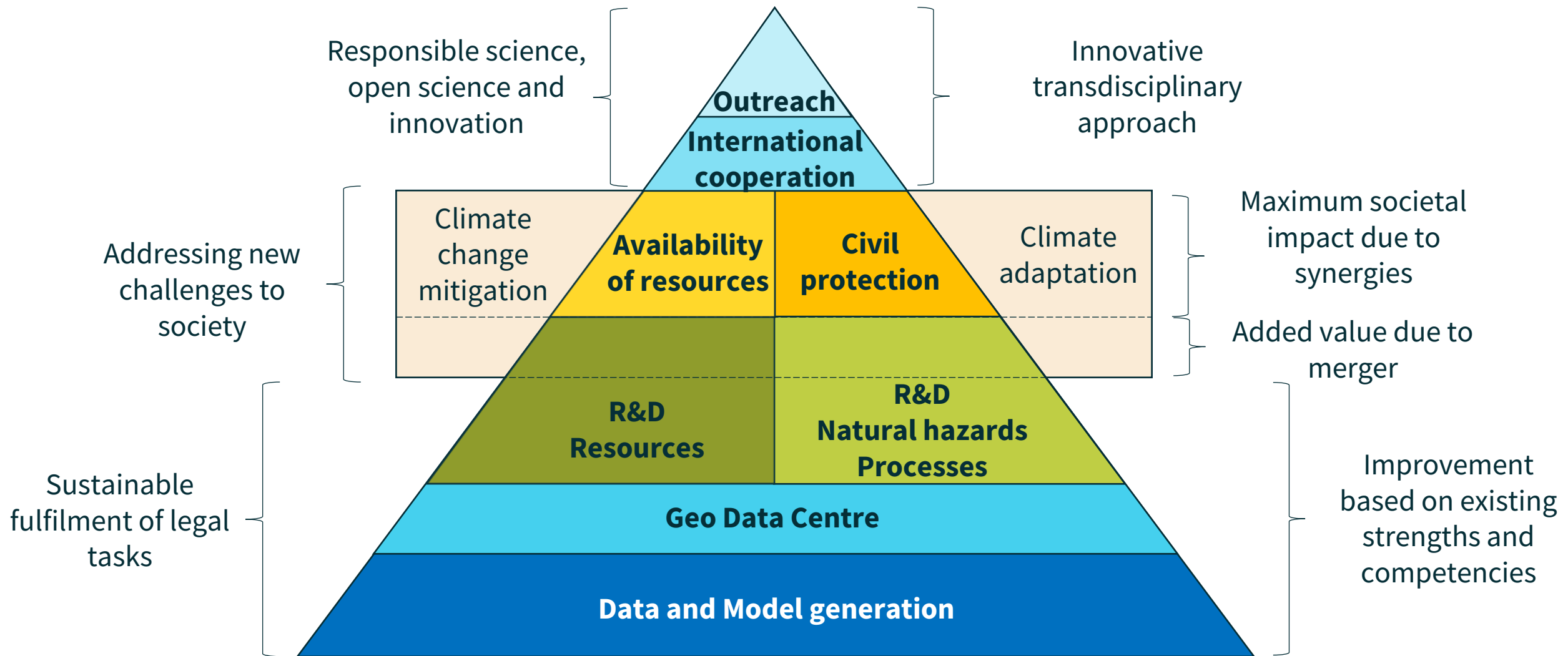
GeoSphere Austria

Federal Agency for Geology, Geophysics, Climatology and Meteorology

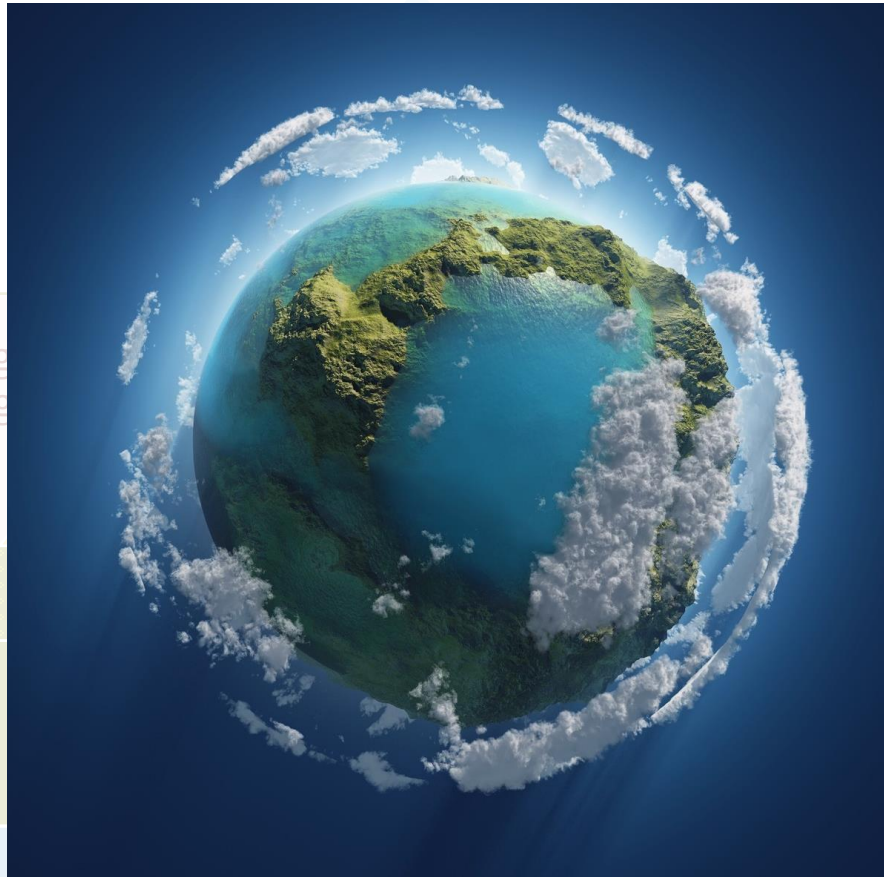
FIELDS OF WORK

New orientation in spheres along the value chain

Spheres along the value chain



Data and Model generation - quantifying the geosphere



Klimafolg
vorsorg

lgen-
gung

Datenzentrum

Data and Model generation

Data and associated models are the foundation for all products and services

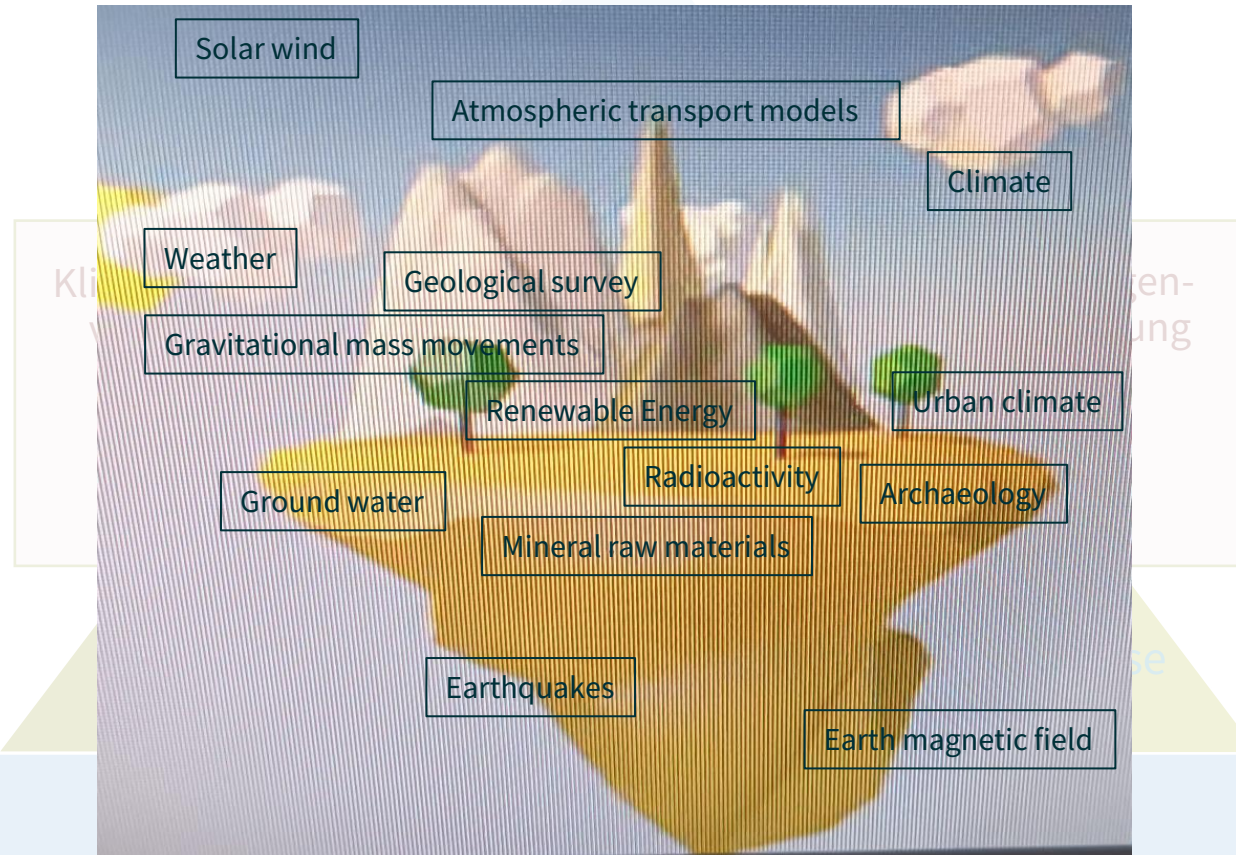
Important

Quality and quantity

Reliable, quality-checked and independently produced in-house data

Utilization of quality checked third-party data as regulated by law

Our data and models cover a broad domain



Data and Model generation

Measures taken by GeoSphere Austria:

Strengthening basic services,
Quality control,
Quality assessments,
Utilizing innovative methods

Impact:

Quantification of processes in the atmosphere and the earth interior does not solely aim at scientific understanding, but is seen as a prerequisite for the development of these spheres as economic areas

Making data available and usable...

...for everybody (society, economy, government and administration, research)

Measures taken by GeoSphere

Austria:

Developing and making available a data infrastructure and repositories for measurement and model data, according to international standards and regulations like FAIR, INSPIRE, PSI...

Impact:

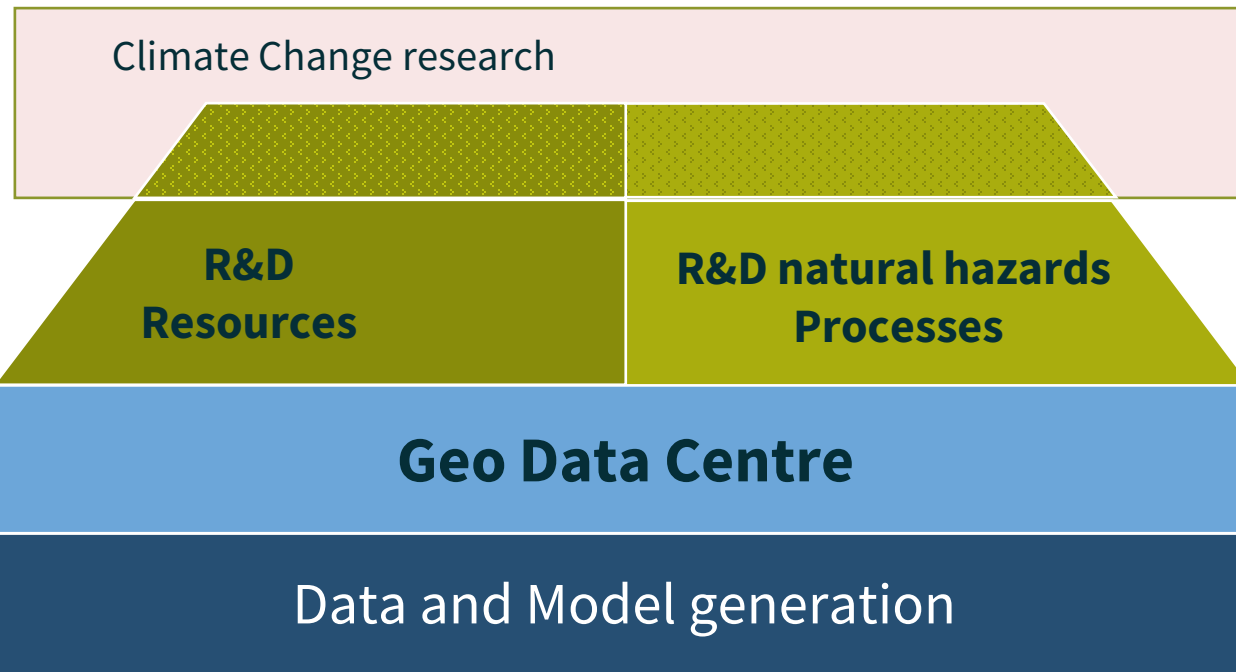
Precondition for innovative R&D approaches, development of new economic sectors and industries; triggering economic development and transformation, enabling of societal participation in political decision processes, creation of level playing fields

Geo Data Centre

Data and Model generation

Knowledge creation and enhanced understanding regarding...

...relevant processes, risks and potentials taking into account climate factors and impacts



Measures taken by GeoSphere Austria:

Synergetic projects,
R&D in cooperation with partners from Universities and other research organizations, focusing on stakeholder and user requirements,
Innovative research cooperation

Impact:

Improved advice and enhanced strategic planning tools for politics and administration
Improved capabilities with regard to data and model generation
Innovative information and advice services regarding climate risks, taking into account EU taxonomy regulation

Products, services and information regarding hazards and natural resources

Measures taken by GeoSphere Austria:

Provision of user specific services and applications

24x7 services

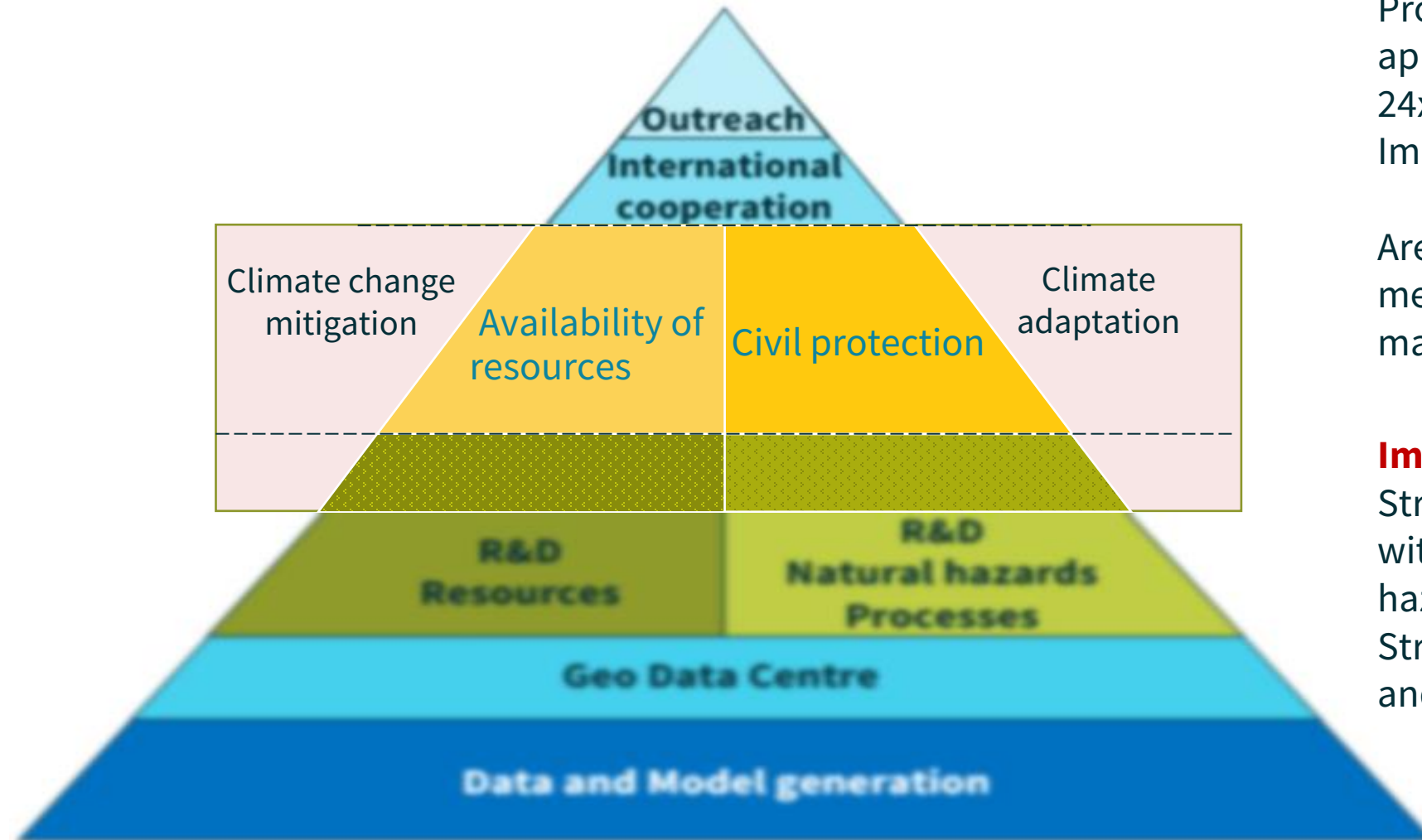
Impact oriented warnings and advice

Area where synergies generated by the merger of the two entities have the maximum effect

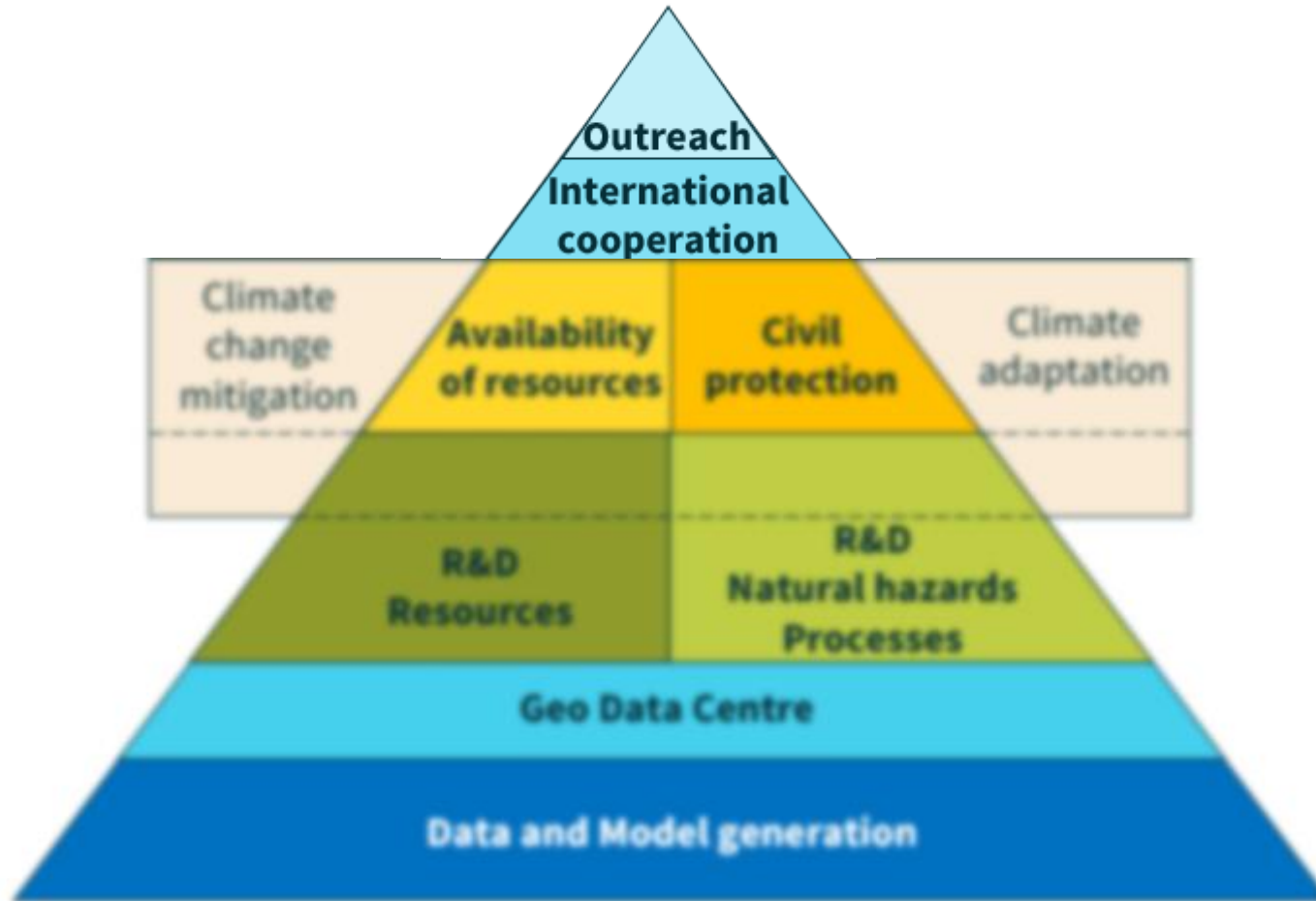
Impact:

Strengthens the resilience of societies with regard to natural and technical hazards and climate warming

Strengthening of multi-hazard warning and advice services



Dissemination of services, products and information towards society and into the international domain



Measures taken by GeoSphere Austria:

Innovative cooperation with social sciences and art
Citizen science projects
Projects regarding the fulfilment of the Societal Development Goals (SDGs) in third countries
Playing an active role in international organizations and associations

Impact:

Enhancement of the resilience of the society
Strengthening of responsible science, increase of trust in science
Strengthening the participation of society regarding political decision making processes

Thanks for your attention!

Trans – creature cooperation ... a vision??

