

While politicians may be putting up borders, scientists are trying even harder to break down national barriers.

# EPOS - European Plate Observing System The distributed Research Infrastructure for solid Earth science

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The EPOS SP Project

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## Multidisciplinary approach to solid Earth science

- Solid Earth science offers answers on how to maintain the Earth a safe and prosperous planet
- Natural processes do not respect national boundaries and scientific disciplines

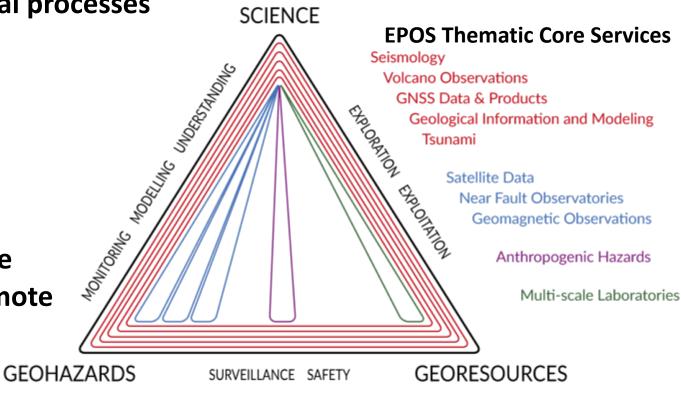
### An integrated, multidisciplinary research approach is needed to

understand Earth's chemical and physical processes

- forecast natural events
- assess hazards and mitigate risks
- sustainably exploit geo-resources

### The key challenge is

to make the enormous wealth of available solid Earth data openly accessible to promote cross- and multi-disciplinary science





## A unique Research Infrastructure for solid Earth science

EPOS, a single, distributed infrastructure that harmonizes and integrates multidisciplinary solid Earth data acquired through diverse scientific systems and disciplines and optimizes their open access to make a step change in developing new concepts and tools for innovative research

**EPOS** brings together European nations and combines

solid Earth science infrastructures and

their capital of human expertise,

data, services and facilities

into one integrated system

for a better understanding of planet Earth dynamics





### **EPOS Vision and Mission**



To ensure sustainable and universal use and re-use of multidisciplinary solid Earth science data and products fostering state-of-the-art research and innovation

To establish a sustainable and long-term access to solid Earth science data and services

integrating diverse European Research Infrastructures under a common federated framework



# NATIONAL RESEARCH INFRASTRUCTURES & DATA CENTERS

### **How EPOS works**

- National RIs generate data for science and society
- Governments maintain the RIs to promote understanding (science), monitoring (hazard) and surveillance (alert)

- Each community integrates its own data and services into a Thematic Core Services (TCS)
- TCS are responsible for integrating data, metadata and services from various infrastructures for each discipline
- TCS guarantee access to standardized, quality-controlled data and services

INTEGRATED CORE SERVICES teroperability lave **METADATA** integration DATA integration SERV Storage **SERVICES** integration **USERS** GOVERNMENTS SOCIETY **SCIENTISTS PRIVATE** SECTOR National Students within solid Earth science Governments Industry any level outside solid Small Funding Earth science Agencies Medium General Enterprises public (SMEs) IT experts European Commission

all data, products and services made available by the NRIs through the TCS for different users and stakeholders

• ICS provide a new interface

Integrated Core Services

(ICS) allows the access to

that by adopting data access policies aligned to Open Science principles, provides data and products in a FAIR form for users

**Findable** 

**Accessible** 

**Interoperable** 

Re-usable

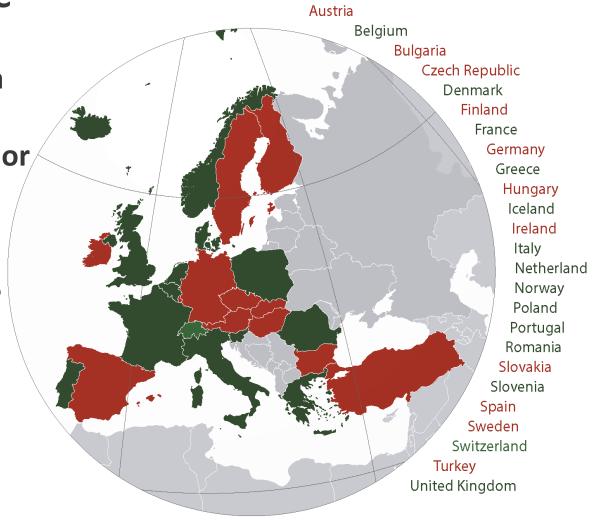
 Different users and stakeholders (including Society) benefit of EPOS

### **EPOS ERIC**

Since October the 30<sup>th</sup> 2018, EPOS is a ERIC

European Research Infrastructure Consortium is a legal entity recognized in all EU Member States without requiring transposition into national law or any national legal instrument

The principal task of an ERIC is to establish and operate a research infrastructure



In green, countries members of the ERIC
In red, countries participating to the EPOS integration plan

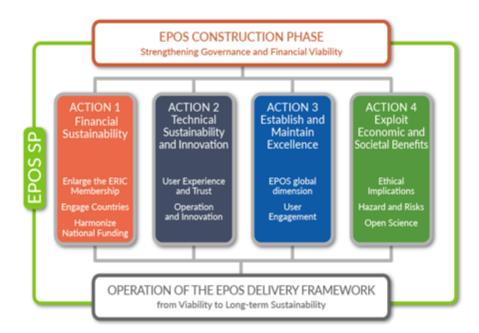


## International Cooperation and Global Dimension The EPOS SP project

The overall objective of the EPOS Sustainability Phase (EPOS SP) project is to perform activities aimed at ensuring the long-term sustainability of the EPOS Research Infrastructure

#### **Strategic Actions**

- secure governance and financial sustainability
- secure technical sustainability and develop innovation
- establish and maintain excellence
- exploit economic and societal benefits

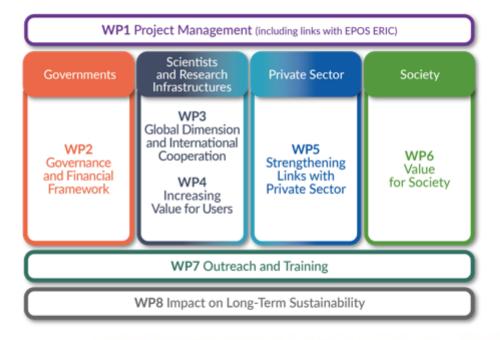


#### **Specific Objectives**

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Developing the global dimension of EPOS

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### **Conclusive remarks**

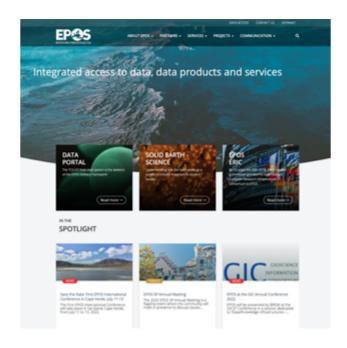
Exploit opportunities to establish a collaborative framework at global level by promoting integration through sustainable science-driven approaches

"By making high-quality facilities, resources and services available to everyone, research infrastructures ensure that science is driven by excellence and not by the research capacity of individual countries, economic sectors, or institutions"

Rita Costa Abecasis and Barbara Pintar



### Web site



www.epos-eu.org

# Thank You! Have a good conference!

### **Data Portal**



https://www.epos-eu.org/dataportal

### Social media

