



**ANTHROPOGENIC
HAZARDS**

EPOS TCS Anthropogenic Hazards Consortium introduces the EPISODES Platform, a digital space for research into anthropogenic seismicity

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- SEISMOLOGY 
- NEAR FAULTS OBSERVATORIES 
- GNSS DATA AND PRODUCTS 
- VOLCANO OBSERVATIONS 
- SATELLITE DATA 
- GEOMAGNETIC OBSERVATIONS 
- ANTHROPOGENIC HAZARDS** 
- GEOLOGICAL INFORMATION AND MODELING 
- MULTI-SCALE LABORATORIES 
- TSUNAMI 

EPOS

THEMATIC CORE SERVICES

EPOS Thematic Core Service Anthropogenic Hazards (TCS AH)



TCS AH Consortium

for managing infrastructure
integration in cooperation
with EPOS ERIC

TCS AH e-NODES

gather episodes with their
multidisciplinary data, manage them
and provide access to AH data

TCS AH EPISODES Platform

provides access to the episodes' data,
software, applications and computational
resources for advanced analysis and visualization

TCS AH mission:

Thematic Core Service Anthropogenic Hazards mission is to integrate - within EPOS - the research infrastructures related to studies of geo-hazards of anthropogenic origin, in particular those caused by the exploration and exploitation of geo-resources.



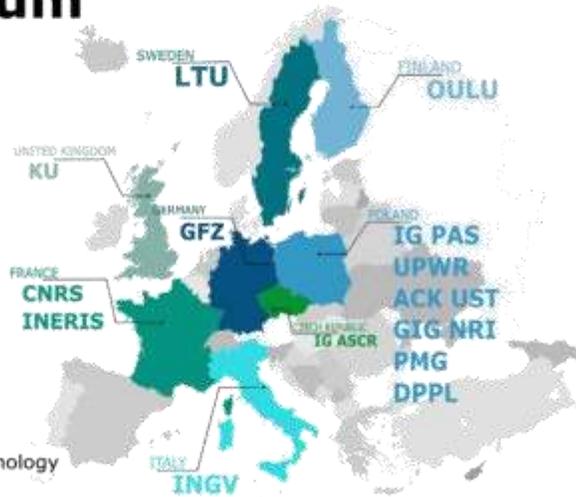
ANTHROPOGENIC HAZARDS

EPOS Thematic Core Service Anthropogenic Hazards (TCS AH) Consortium

15 Institutions from 8 European and 1 Non-European Country

TCS AH Consortium

EUROPE



- SWEDEN**
 - Lulea University of Technology
- FINLAND**
 - University of Oulu
- UNITED KINGDOM**
 - Keele University
- FRANCE**
 - Centre National de la Recherche Scientifique
 - French National Institute for Industrial Environment and Risks
- GERMANY**
 - German Research Centre for Geosciences
- CZECH REPUBLIC**
 - Institute of Geophysics of the Czech Academy of Sciences
- ITALY**
 - National Institute of Geophysics and Volcanology
- POLAND**
 - Institute of Geophysics Polish Academy of Sciences
 - Wrocław University of Environmental and Life Sciences
 - Academic Computer Centre Cyfronet AGH
 - Central Mining Institute National Research Institute
 - Polish Mining Group
 - DPPL



SOUTH AMERICA





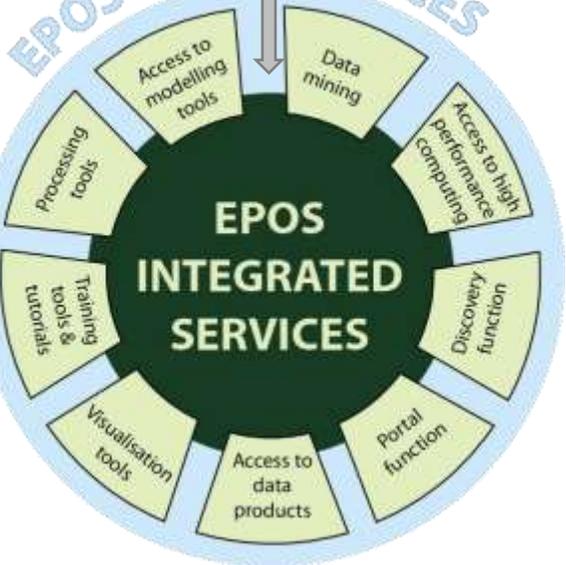
TCS AH INTEGRATED INFRASTRUCTURE



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USERS

EPOS CORE SERVICES



USERS



DATA NODES - maintain and develop the distributed episode database

Data Node IG PAS, Warsaw

Data Node EOST, Strassbourg

Data Node CMI, Katowice

Data Node GFZ, Potsdam

Data Node LTU, Lulea

Access to the integrated research infrastructure of EPOS TCS AH: episodes (datasets), applications (software), workspace, HPC, collaboration functionalities, document repository



ANTHROPOGENIC
HAZARDS

EPISODES
PLATFORM

EPISODES Platform

Documents

Support

EN

LOGIN

SIGN UP

Welcome to EPISODES Platform of EPOS Thematic Core Service Anthropogenic Hazards

Designed to help you in:

- analyzing anthropogenic seismicity and related hazards
- assessment of potential environmental impact of geo-resource exploitation
- education

TRY EPISODES PLATFORM

42

Worldwide
episodes

73

Dedicated
services

297k

Data Iterro

>1800

Professional
users

European Plate Induced Seismicity Observations
& Datasets within EPOS Services Platform

Language
English,
French,
Polish,
Italian

EPOS
EUROPEAN PLATE OBSERVING SYSTEM

<https://EpisodesPlatform.eu/>

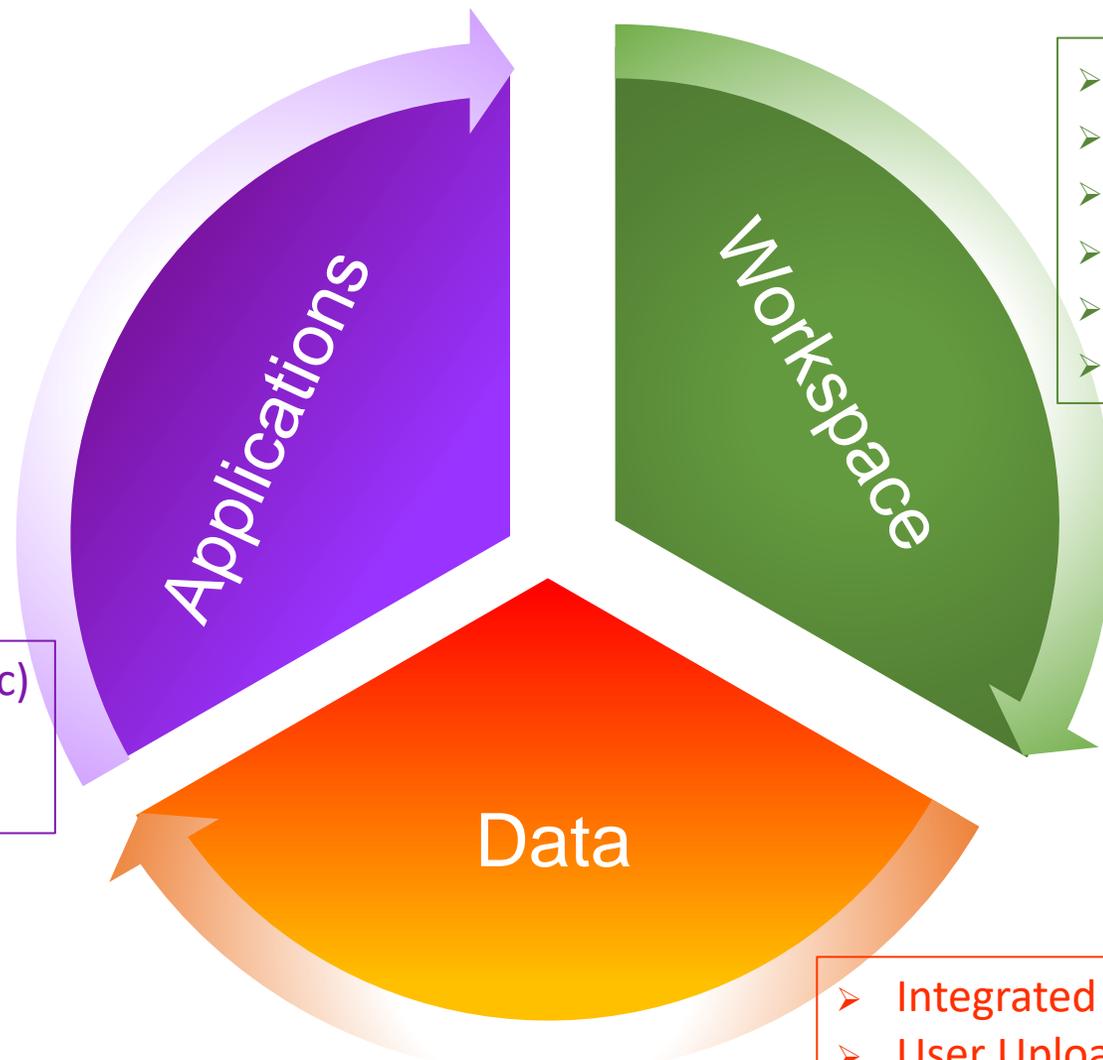
EPISODES Platform - a virtual laboratory



ANTHROPOGENIC
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- Analysis and Modelling Apps: 40
- Data Handling Apps: 25
 - Download Tools,
 - Converters,
 - Reconstruction Tools
- Specialized Visualization Apps: 6

- Implemented (public) **software tools**
- Private applications



- Data and apps private repository
- Programming
- Workflow building
- Data processing → HPC
- Data and results sharing
- Collaboration

- Integrated **episodes (42)**
- User Uploads

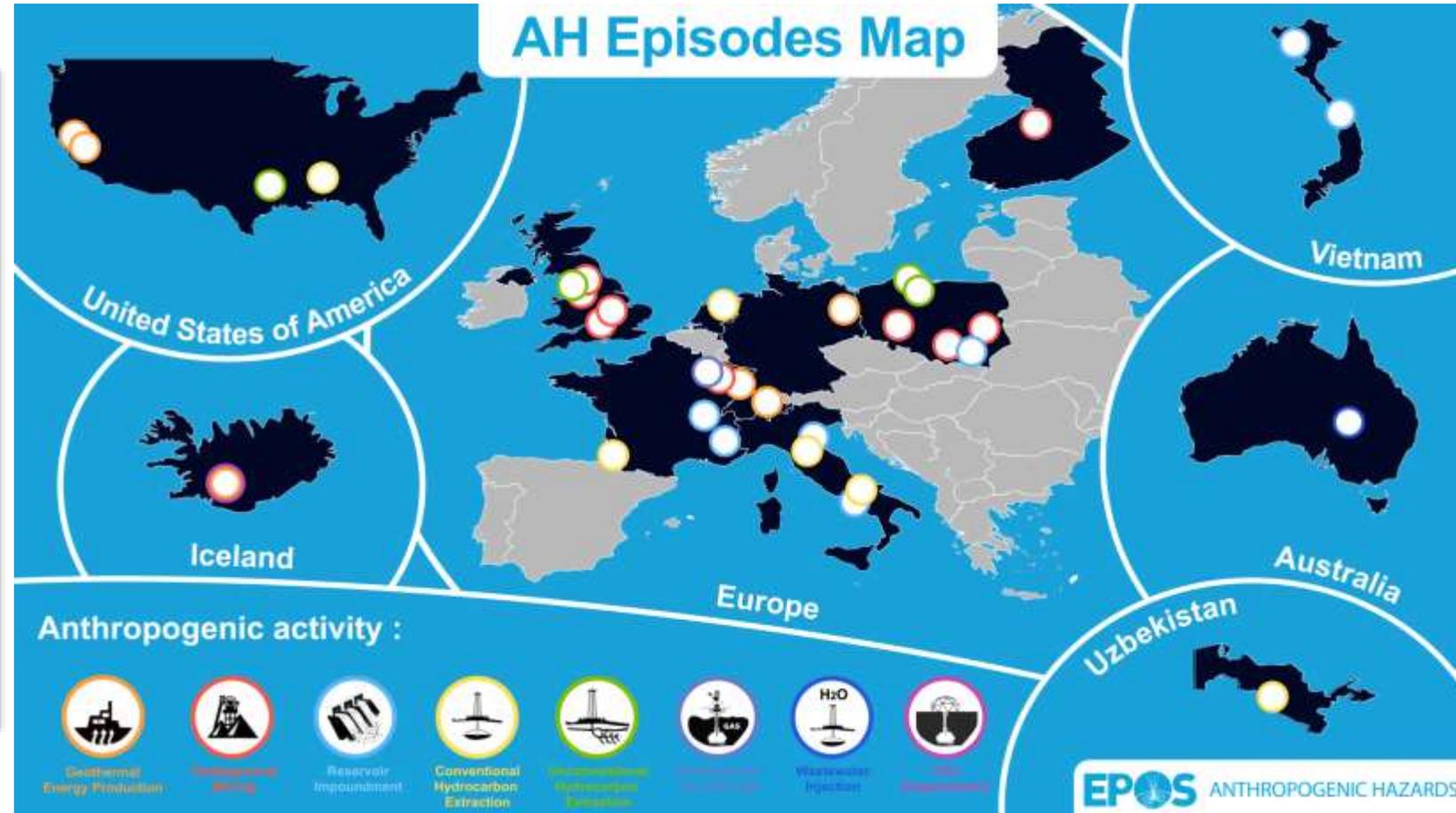


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Inducing technologies:

CO2 sequestration	- 1
Conventional hydrocarbon extraction	- 5
Geothermal energy production	- 11
Reservoir impoundment	- 6
Underground gas storage	- 1
Unconventional hydrocarbon extraction	- 5
Underground mining	- 13
Wastewater injection	- 2
<i>Planned and pending integration</i>	- 5

Episodes: Sets of time-correlated seismic, technological, and other relevant geo-data that relate comprehensively anthropogenic seismic processes to their industrial causes





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Report for: 2023-01-01 – 2023-10-31

- **1791 users of the EPISODES Platform from 64 countries**
- **1223 users with institutional affiliation from 426 institutions**
- **190 new users registered in 2023**



- **9035 file downloads from an external repository**
- **1252 file downloads from workspace**
- **1756 files added to workspace**
- **639 uploaded files**



FOR THE IMPLEMENTATION OF TCS AH SERVICES

LEADER: [Joanna Kocot](#) Cyfronet, Poland

Maintain technical resources and software components that are used for the delivery of services, including monitoring security and upgrading the systems to avoid vulnerabilities.

FOR EPISODE INTEGRATION AND APPLICATION IMPLEMENTATION

LEADER: [Aglaja Blanke](#) GFZ, Germany

Adds and manages new episodes and new applications provided by the EPISODES Platform related to anthropogenic hazards. Provides maintenance to episodes and applications already integrated in the EPISODES Platform, including application, data and metadata updates

FOR PROMOTION AND DISSEMINATION

LEADER: [Glenda Jones](#) KU, United Kingdom

Maintains and develops existing social media channels compiles dissemination materials and sets up a communication plan and strategy.
Defines stakeholder categories and target stakeholder organizations

FOR PROJECTS & PARTNERSHIP

LEADER: [Savka Dineva](#) LTU, Sweden

Establishes multi-sector collaboration, strategic partnerships. Prepares technical requirements for new data and software (in collaboration with the sections for Episodes Integration and Application Implementation and implementing TCS AH services)



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USER COMMITTEE

LEADER: [Ian Stimpson](#)

The User Committee is composed of main representatives of the community selected by the Consortium. The User Committee forms the policy for gaining User feedback concerning services of TCS AH.

TCS AH External Committees

INNOVATION ADVISORY COMMITTEE

LEADER: [Christophe Maisons](#)

The Consortium Council and representatives of TCS AH Stakeholders from academia, industry, science, local and central administration bodies, NGO-s and others, form IAC. The IAC consults long term strategies of TCS AH.

DATA PROVIDER COMMITTEE

LEADER: [Sławomir Olechowski](#)

The Data Provider Committee forms the policy concerning requirements as to the quality of the provided data and apps and quality control.



Please accept our kind invitation to visit:



[EpisodesPlatform.eu](https://episodesplatform.eu)



tcs.ah-epos.eu