

# EPOS ANTHROPOGENIC HAZARDS

The exploitation of georesources entails significant risks and changes to the environment. To enhance the understanding and mitigation of these hazards, the TCS Anthropogenic Hazard (AH) operates through the EPISODES Platform ([episodesplatform.eu](https://episodesplatform.eu)), a comprehensive e-research digital environment and workspace that connects international data nodes and provides open access to multidisciplinary datasets, termed "episodes", software, applications and computational resources for advanced analysis and visualization. EPISODES encompass critical data related to various subsurface activities, such as CO<sub>2</sub> sequestration, hydrocarbon extraction, geothermal energy production, and more.



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

## Mission

The ANTHROPOGENIC HAZARDS TCS 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

## Infrastructure

### Datasets + applications + workspace + HPC

The platform not only facilitates experimental research in a virtual laboratory but also promotes interdisciplinary collaboration among scientists, industry partners, and the community. It offers functionalities for data integration, visualization, and analysis, addressing correlations between technological activities and induced seismic responses. In addition to a portfolio of applications designed for addressing anthropogenic hazards, TCS AH supports public knowledge dissemination and serves as an educational tool. It emphasizes the importance of managing and sharing datasets while respecting intellectual property rights, thereby fostering an environment conducive to research innovation.



[www.epos-eu.org/tcs/anthropogenic-hazards](https://www.epos-eu.org/tcs/anthropogenic-hazards)

## Data eNODEs

The AH e-Node which gather episodes with their multidisciplinary data, manage them and provide access to AH data; Data Nodes linked to the EPISODES platform, which gather episodes with their multidisciplinary data, manage them and upon request, make them available to the platform. The TCS-AH Consortium continually integrates new episodes, guaranteeing data sustainability, making them accessible through the EPOS ICS data portal ([www.ics-c.epos-eu.org](http://www.ics-c.epos-eu.org)).

## TCS AH Consortium

Institute of Geophysics Polish Academy of Sciences (coordinator) | Academic Computer Centre Cyfronet AGH | Centre National de la Recherche Scientifique | French National Institute for Industrial Environment and Risks | GIG National Research Institute | Helmholtz Zentrum Potsdam Deutsches Geoforschungszentrum | Institute of Geological Sciences, Polish Academy of Sciences | Instituto Nazionale di Geofisica e Vulcanologia | Institute of Geophysics of the Czech Academy of Sciences | Keele University | Lulea University of Technology | University of Oulu | Wrocław University of Environmental and Life Sciences | Polish Mining Group | Drobot Popławski Przybyłowicz Liszka-Gronek associate member | Federal University of Rio Grande Do Norte  
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## Social media

<https://www.facebook.com/AnthropogenicHazards>  
<https://www.youtube.com/@anthropogenichazard585>  
[https://x.com/TCS\\_AH](https://x.com/TCS_AH)

**EPOS, the European Plate Observing System**, is a multidisciplinary, distributed research infrastructure that facilitates the integrated use of data, data products, and facilities from the solid Earth science community in Europe. EPOS ensures the long-term access to Solid Earth science data and services, with the goal of answering some of the most pressing societal questions concerning geo-hazards and those geodynamic phenomena relevant to the environment and human welfare.

