Studying induced seismicity within the EPOS Thematic Core Service on Anthropogenic Hazards (TCS-AH)


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EPOS TCS-AH brings together a broad community interested in Anthropogenic Hazards (AH) related to induced seismicity. It is designed as a functional e-research infrastructure that provides access to a large set of relevant data and allows free experimentations in a virtual laboratory, promoting interdisciplinary collaborations between stakeholders (the scientific community, industrial partners and society).

The plateform provides datasets as Episodes, comprehensively sets of time-correlated, standardized datasets from exploration/exploitation of geo-resources, composed of seismic, industrial, geo and additional data. Two local centres provide metadata and data in commonly used standards and formats. A registration/authorization is mandatory to access some data covered by restriction (running projects, industrial data).

Episodes are related to different categories:
- CO2 sequestration
- conventional hydrocarbon extraction
- geothermal energy production
- reservoir impoundment
- unconventional hydrocarbon extraction
- underground gas storage
- underground mining
- wastewater injection

APPLICATIONS
The plateform grants access to an application portfolio, designed to analyse anthropogenic seismicity and related hazards, and process the data in a private workspace, including:
- data integration, handling and display
- build of physical models of stress/strain changes
- analyses of geophysical signals
- extraction of the relation between technological observations and observed induced seismic/deformation
- probabilistic assessment of anthropogenic seismic hazard.

Results of analyses are downloadable from private workspace.

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