



## The Transnational access and training in the Geo-INQUIRE EU-project, an opportunity for researchers to develop leading-edge science at selected facilities and test-beds across Europe

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The Geo-INQUIRE (Geosphere INfrastructure for QUEStions into Integrated REsearch) project, supported by the Horizon Europe Programme, is aimed at enhancing services to make data and high-level products accessible to the broad Geoscience scientific community. Geo-INQUIRE's goal is to encourage curiosity-driven studies into understanding the geosphere dynamics at the interface between the solid Earth, the oceans and the atmosphere using long data streams, high-performance computing and cutting-edge facilities.

In the framework of Geo-INQUIRE, Transnational Access (TA, both virtual and on-site) will be provided at six test beds across Europe: the Bedretto Laboratory, Switzerland; the Ella-Link Geolab, Portugal; the Liguria-Nice-Monaco submarine infrastructure, Italy/France; the Irpinia Near-Fault Observatory, Italy; the Eastern Sicily facility, Italy; and the Corinth Rift Laboratory, Greece. These test beds are state-of-the-art research infrastructures, covering the Earth's surface, subsurface, and marine environments over different spatial scales, from small-scale experiments in laboratories to kilometeric submarine fibre cables. The TA will revolve around answering scientific key-questions on the comprehension of fundamental processes associated with geohazards and georesources such as: the preparatory phases of earthquakes, the role of the fluids within the Earth crust, the fluid-solid interaction at the seabed, and the impact of geothermal exploitation. TA will be also offered for software and workflows belonging to the EPOS-ERIC and the ChEESE Centre of Excellence for Exascale in Solid Earth, to develop awarded user's projects. These are grounded on simulation of seismic waves and rupture dynamics in complex

media, tsunamis, subaerial and submarine landslides. HPC-based Probabilistic Tsunami, Seismic and Volcanic Hazard workflows are offered to assess hazard at high-resolution with extensive uncertainty exploration. Support and collaboration will be offered to the awardees to facilitate the access and usage of HPC resources for tackling geoscience problems. Geo-INQUIRE will grant TA to researchers to develop their own lab or numerical experiments with the aim of advancing scientific knowledge of Earth processes while fostering cross-disciplinary research across Europe. To be granted, researchers submit a proposal to the yearly TA calls that will be issued three times during the project life. Calls will be advertised at the Geo-INQUIRE web page <https://www.geo-inquire.eu/> and through the existing community channels.

To encourage the cross-disciplinary research, Geo-INQUIRE will also organize a series of training and workshops, focused on data, data products and software delivered by research infrastructures, and useful for researchers. In addition, two summer schools will be organized, dedicated to cross-disciplinary interactions of solid earth and marine science.

The proposals, for both transnational access and training, will be evaluated by a panel that reviews the technical and scientific feasibility of the project, ensuring equal opportunities and diversity in terms of gender, geographical distribution and career stage. The first call is expected to be issued by the end of Summer 2023. The data and products generated during the TAs will be made available to the scientific community via the project's strict adherence to FAIR principles.