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EU-financed transnational access in Geo-INQUIRE: an opportunity for researchers to develop leading-edge science at selected test-beds and research facilities 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.

The Geo-INQUIRE Transnational Access (TA) covers both virtual and on-site access to a variety of state of the art laboratories, facilities, experimental sites (testbeds) and computational resources with the aim of enabling the development of excellent ground-breaking science. Six research infrastructures located across Europe, referred to as "testbeds", will provide locations for users to perform experiments in a variety of environments from the Earth's surface (both on land and at sea) to the subsurface; over different spatial scales: from small-scale experiments in laboratories to kilometric submarine fibre cables. These sites are: 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). In addition, ECCSEL-ERIC is providing access to 5 of its research facilities focussing on CO2 Capture, Utilisation, Transport and Storage. The facilities providing access are: Svelvik CO2 Field Lab (Norway), PITOP Borehole Geophysical Test Site (Italy), Sotacarbo Fault Laboratory (Italy), Catenoy experimental site and gas-water-rock interaction Laboratory in Oise

(France) and the Mobile Seismic Array (the Netherlands) which is fully mobile and can be deployed anywhere in the world.

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. 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-based or numerical experiments with the aim of advancing scientific knowledge of Earth processes while fostering cross-disciplinary research across Europe. 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.

To be granted, researchers submit a proposal to the TA calls that will be issued three times during the project life. The first call was launched on the 9th January. Calls will be advertised on the Geo-INQUIRE website https://www.geo-inquire.eu/ and through the existing community channels.