2021-25 Task Force II

DEFORMATION AND MAGMATIC PROCESSES FROM THE LITHOSPHERE TO THE SURFACE: INTEGRATED MULTIDISCIPLINARY APPROACHES

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Research activities

- **Collection of interdisciplinary data related to TF II themes including:**

- field data by different methodologies at several volcanoes in different countries,
- analogue physically-scaled experiments,
- numerical modelling.

- The research network of 68 scientists from 18 countries was expanded with 11 more researchers.
- Results have been published in 67 peer-reviewed papers - list of publications on the TF II website.

Dissemination and meetings

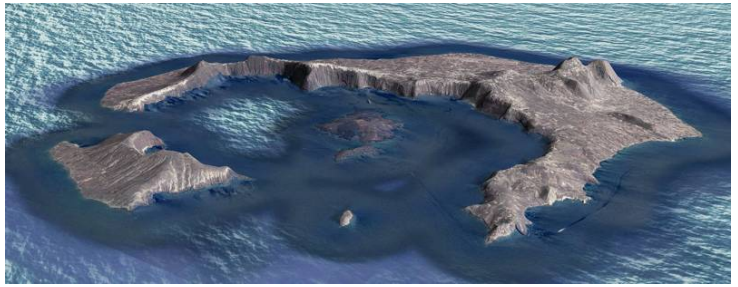
- We developed and updated a dedicated website: **www.ilptaskforce2.unimib.it**
- EGU TS5.4 Studying tectonic and volcanic active areas by geomorphological observations and data collection on high-resolution models, and numerical simulations of tectonic and gravity driven processes.
- EGU GMPV9.5 Volcanic processes: tectonics, deformation, geodesy, unrest.
- EGU SM6.1 Earthquake swarms and complex seismic sequences driven by transient forcing in tectonic and volcanic regions.
- EGU NH2.1 A multidisciplinary perspective on past to present volcanism and volcanic hazards.

Examples of projects funded in 2021:

Erasmus Plus (together with ILP task Force Lithomar)
Bridging the gap between the land and the sea in a virtual environment for innovative teaching and community involvement in the science of marine geohazard and climate changes.

NATO
Prevention of impending, geo-related threats to Azerbaijan's energy independence.

Plans for 2022

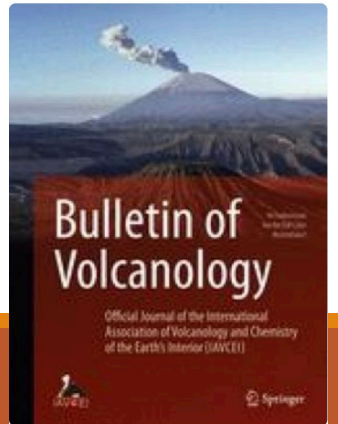


- **Teaching & young researchers**
  - International Summer School at Santorini volcano, Greece (end of September-beginning of October 2022);
  - Volcanological field trip in Santorini linked to the 12-17 June 2022 Cities on Volcanoes (COV11) international congress (Heraklion, Crete);

- **Congresses**
  - Two sessions at the COV11 congress (Heraklion), June 2022;
  - Three sessions at the EGU congress, Wien;

- **Field and lab work**
  - Several field missions are already planned, e.g. Iceland and Mt Etna, + joint lab work;

- **Submission of new projects**
  - e.g. ”Volcanic Risk at Italian Volcanoes”, 350 researchers, 11 M Euro.

MUR
Ministero dell'Università e della Ricerca

- **Special Issue of Bulletin of Volcanology**
  “Volcanic Processes: Tectonics, Deformation, Geodesy, Unrest”,
  Guest Editors: W. Chadwick, J. Ruch, A. Tibaldi