# Name of the Union Activities' Report - Year 2022

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#### 1. Introduction

In the year 2022, in particular starting in its Spring-Summer, the IAVCEI could recover several activities and events which had been postponed due to the problems posed by the Covid-19 pandemics. The most important event, namely the 11<sup>th</sup> Cities On Volcanoes International Conference (COV11), could finally took place, after being progressively postponed since 2020. The Conference has been held at Heraklion (Crete, EL), in the period 12-17 June 2022.

Accordingly, the Scientific Assembly IAVCEI, scheduled at Rotorua (NZ) in 2021, postponed initially to January 2022, has been definitively re-scheduled to year 2023 (January 30<sup>th</sup> to February 3<sup>rd</sup>).

#### 2. Main activities carried on by (Union name) during 2022 relevant for Italy and for CNR

As mentioned, the main event of 2022 has been the 11<sup>th</sup> Cities On Volcanoes International Conference (COV11) held at Heraklion (Crete, EL). The participation of Italian volcanological community has been large and qualified. The arguments of the Conference have been particularly important for Italy, since our country is characterized by high volcanic risk, particularly concentrated in the Southern part. Particularly interesting have been the presentations devoted to the mitigation of the extreme volcanic risk in the Neapolitan area, an even more crucial argument in the last years, due to the continuing and increasing unrest occurring at Campi Flegrei area. As it is well known, the Conference format 'Cities On Volcanoes' represent the most important periodic events organized by IAVCEI, together with the Scientific Assemblies, because they conjugate high scientific volcanological interest with considerations about the mitigation of volcanic risk in densely populated areas, then having strong potential involvement in civil protection applications.

In the Summer 2022, since 12 to 15 July, took place also the Goldshmidt International Conference, mainly devoted to fluid geochemistry. Also this Conference had been postponed, since 2021, due to problems posed by Covid-19 pandemics. It has finally been held at Honolulu, Hawaii (USA), and many arguments afforded there have been of broad interest for Volcanology and hence for Italy.

## 3. Activities carried on by (Italian Delegate name) within the Union during 2022 and impact on the Italian scientific community

As a representative of the IAVCEI for CNR, in 2022 I took advantage from the rather complete recovery of International connections in-person, after the pandemics, to restore the direct contacts with IAVCEI and its leadership. I participated to COV11 at Heraklion, even presenting my own scientific contributions on the volcanic risk mitigation in Neapolitan area of Italy, and further agreed with IAVCEI chairman to held a IAVCEI International Workshop in Naples (Italy), mainly focused on Campi Flegrei caldera and Campanian Plain Ignimbrite eruptions. I also participated to the Rittmann International Conference in Catania (I), September 2022. During such a Conference, also attended by the IAVCEI chairman and the Secretary General, we further finalized the organization of the Naples meeting, by also fixing the dates (2-4 May) and deciding to organize a field trip, on May 5<sup>th</sup>, to show new data and interpretation about the largest eruption ever occurred in Europe and in the Mediterranean area: namely the Campanian Ignimbrite occurred 40 ky ago.

As clearly stated in the last years, IAVCEI activities have large and positive impact on the volcanological community in Italy, and IAVCEI itself largely benefits from the Italian scientific contribution. On the other hand, Italy is characterized by the highest volcanic risk in the world, concentrated within the Naples area, and also hosts the largest land extension in Europe, just after the Island, affected by volcanic activity.

#### 4. Evaluation of the participation in terms of benefits and membership cost

As always stated in the previous annual reports, I am convinced the cost/benefit ratio of the Italian participation to IAVCEI is absolutely negligible, mainly because, since Italy is the country with the highest volcanic risk in the World, it would be impossible to imagine its withdrawal from the largest and most qualified Volcanological community. Volcanology is a rapidly improving science, but still at a level needing a high degree of International cooperation, because any individual volcano in the World represents a unique and irreplaceable 'natural laboratory'.

#### 5. Evaluation of Italians' attendance and how to improve interest and involvement

Italian participation to IAVCEI is today at very high point, for involvement and interest. Actually, the Secretary General of the Association is Italian (Roberto Sulpizio), and the Chairman himself, Patrick Allard, has a profound knowledge of the Italian volcanism and strong connections with the Italian volcanological community, since about 40 years.

In the year 2022, as already mentioned, we could finalize the organization of the International Workshop about Campi Flegrei and unrest phenomena. Regarding this argument, it must be stressed that the internationalization of the scientific research related to Campi Flegrei unrest and, more in general, to the risk mitigation in the Neapolitan volcanic area, is of fundamental importance. Despite the involvement and interest of Italian volcanologists in IAVCEI activities is high anyway, it would certainly be significantly increased by a certain level of financial support (on the order of 10.000-100.000 € per year) to fund the organization of thematic meetings and/or the participation of Italian scientists to research activities at foreign, international volcanological centers.

### 6. Italian experts with important roles within the Union or within related Commissions and Programs (if known)

The Secretary General of IAVCEI is Prof. Roberto Sulpizio, from Università degli Studi di Bari 'Aldo Moro'. Moreover, Dr. Eugenio Nicotra, from Università Della Calabria, is the Responsible for Communication and web sites of the IAVCEI Commissions.

Also numerous is the Italian leadership in the thematic Commissions, as detailed in the following:

Chemistry of volcanic gas: Franco Tassi (Università di Firenze)

Volcanic Lakes: Dimitry Rouwet (INGV) Volcanic Geology: Gianluca Groppelli (CNR)

Collapse calderas: Guido Giordano (Università Roma Tre)

Explosive volcanism: Daniele Andronico (INGV) e Mattia de Michieli Vitturi (INGV)

Tephra hazard modelling: Marco Pistolesi (Università di Pisa)

Volcanic Geodesy: Alessandro Bonforte (INGV)

#### 7. If Union with CNR Commission, short summary about the 2022 CNR Commission activities

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#### 8. Notes (if any)

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#### 9. Conclusions

Year 2022 has seen a strong recovering of the IAVCEI activities, after the previous two years marked by the pandemics problems, which caused a slow-down of activities and the postposition of the main Conferences and Meetings. The most important event of the year has been the COV11 Conference, held at Heraklion (EL). Has been furthermore definitively established, with dates and basic organization, the IAVCEI Workshop in Naples, Italy, about Campi Flegrei caldera and Ignimbrites of the Campanian Plain.

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Place and date

Naples, 31/5/2023