

IUGS - International Union of Geological Sciences

Activities Report - Year 2017

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1. Introduction

Founded in 1961, the International Union of Geological Sciences (IUGS) is one of the largest and most active scientific NGOs in the world. IUGS promotes and supports the study of geological problems of global interest and facilitates cooperation and interdisciplinarity in Geological Sciences. One of the major Unions of the International Science Council, IUGS has more than 110 Adhering Nations and represents more than 50 scientific Associations.

2. Main activities carried on by the Union during 2017 relevant for Italy and for CNR

The activities of the IUGS Commissions are at the base of the daily work of geologists, in Italy and in the world. The nomenclatures, the classifications, the normative parameters, the analytical procedures, the protocols -the so-called *geostandards*- are studied and fixed conventionally by the IUGS Commissions. If geologists from all over the world speak a common language and can effectively compare the results of research and professional and industrial activity, it is because -for over half a century- IUGS has mobilized a large number of geologists in order to encourage discussion and consensus.

In addition to representing a platform for international consensus in geological practices, IUGS is active in identifying and stimulating potentially emerging disciplines. For example, in recent years IUGS activities have focused international attention on two new and important disciplines such as Medical Geology and Forensic Geology. Even in this case, it is difficult to identify the effects - although considerable - of the various IUGS activities at the level of the individual nations. We can however consider the foundation of the Association of Medical Geology and the Forensic Geologists Association as a fallout of IUGS activities at the national level.

3. Activities carried on as Italian Delegate within the Union during 2017 and impact on the Italian scientific community

As the Italian delegate in IUGS, I distributed communications from the Executive Committee and the Secretariat. Of particular importance is the attention given to the Italian participation in the creation of geoparks.

The Geoparks and the Italian community of Earth Sciences - 30 May 2017 - Accademia dei Lincei (Rome). Organizers: T. Bagnati, A. Boriani (Coordinator), V. Caironi, B. D'Argenio, E. Erba, A. Praturlon. The meeting underlined the importance of geoparks in Italy (10 of the 127 UNESCO Global Geoparks are located in Italy). Main topics of discussion were, among others: (i) the relationships between the geoparks and the Italian scientific community, (ii) the role of the geoparks for education, (iii) geoparks and the media.

4. Evaluation of the participation of CNR to IUGS in terms of benefits and membership cost

It is practically impossible to assess the direct benefits of the Italian participation in the IUGS. The activity of the Union is fundamental and irreplaceable for researchers of the various disciplines of Earth Sciences, geological services, laboratories of analysis, and professionals. From this point of view, the support of the CNR - as well as of the various Academies, Geological Services, Ministries, and Research Bodies of the over 100 member countries of the IUGS - may be seen and interpreted as a support to a basic international activity, essential for the entire global research system in the field of Earth Sciences.

5. Evaluation of Italians' attendance to events and actions to improve interest and involvement

The Italian community has always been significantly involved in the various activities of the IUGS, both at the organizational and scientific level. Among the IUGS events that took place in Italy during 2017 and which were organized in whole or in part by Italian colleagues, we mention:

- IGCP Joint Meeting Project No.610 "From the Caspian to Mediterranean: Environmental Change and Human Response during the Quaternary" and INQUA IFG POCAS "Ponto-Caspian Stratigraphy and Geochronology"
- Palermo, 1-9 October 2017

6th European Meeting on Forensic Archeology (EMFA 2017) - August 18-19, 2017 - Rome. Sponsored by the IUGS Commission on Forensic Geology.

As regards the Italian participation in the international scientific cooperation program IGCP (IUGS-UNESCO), Project 641 - *Deformation and fissuring caused by exploitation of subsurface fluids* (2015-2019) is co-led by Prof. Pietro Teatini of the University of Padua. Italian researchers participated in the activities of eight other IGCP projects during 2017.

6. Italian experts with important roles within the Union or within related Commissions and Programs

Italian representatives are part of the main management bodies of the IUGS, namely the Bureau and the Executive Committee, and preside or participate in the activities of various IUGS Committees and Commissions. Currently, Italy has two representatives in the Executive Committee, made up of ten members. Together with Germany, it is the only country with two representatives. Regarding the international scientific cooperation program IGCP (IUGS/UNESCO), currently a project is directed by an Italian researcher (see point 5).

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Isabella RAFFI
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Carlo Alberto RICCI
Delegate IUGS within SCAR (Scientific Committee on Antarctic Research)

Ezio VACCARI
Vice-President, IUGS Commission on the History of Geological Sciences

Igor M. VILLA
Chair, IUGS Task Group on Isotope Geology and Geochronology

7. If Association with CNR Commission, short summary about the 2017 CNR Commission activities

Members of the Commission are: Dr. Marco Amanti, Dr. Carlo Baroni, Prof. Attilio Boriani (President), Dr. Daniela Di Bucci, Prof. Carlo Doglioni, Prof. Massimo Frezzotti, Dr. Biagio Giaccio, Dr. Antonello Provenzale, Prof. Isabella Raffi, Dr. Fabio Trincardi, Dr. Gianluca Valensise, Prof. William Cavazza, IUGS Liaison.

The Italian National Commission of IUGS publishes in electronic format an annual report on the International Geoscience Program (IGCP), which is distributed to the entire scientific community of Earth Sciences through the Italian Geological Society.

The report reaches more than 2,000 geoscientists. The Commission does not directly organize activities for the dissemination of scientific culture. However, some members of the Commission participated in organizing the 2017 edition of "Planet Earth Week" (October 15-22), a series of events aimed at promoting awareness of geological issues among a large audience. The last edition of the Week included more than 200 events and the participation of about 80,000 people.

The CNR-IUGS Commission operates as Italian National Committee of IUGS. It was reconstituted with the decree of the CNR President n. 89/2015 (AMMCNT-CNR protocol No. 0081245 of 11/27/2015) and in 2017 the Commission carried on its activities using circular e-mails in order to agree on all planned activities. President of the Commission since November 2016 is prof. Attilio Boriani and dr. Cecilia Lalle is the secretary.

The Commission, with a mandate until the end of 2018, has also the aim of providing guidelines and proposals for promoting Italian participation in the Union's activities and providing the necessary support to the CNR on issues concerning international initiatives and activities promoted by IUGS. The activities carried out by the Commission in 2017 include:

1. Communication sent to share the synthesis of a very recent report prepared by Prof. David Harper (University of Durham), Chair of the International Commission on Stratigraphy (ICS) of IUGS which highlights the prominent role played by Italian researchers in the organization of the ICS Commission;
2. Communication sent via email to Members concerning various calls from ICSU partners to evaluate and support possible candidates and verify any participations concerning:
 - a. IPCC call for nominations for the "Special Report on the Ocean and Cryosphere in a Changing Climate"
 - b. IPCC Call for nomination for the "Special Report on Climate Change and Land"
 - c. Future Earth PEGASuS* (Program for Early-stage Grants Advancing Sustainability Science) Global online discussion on Science, Technology and Innovation for the Sustainable Development Goals;
3. the Italian Report CNR-IUGS-IGCP 2017 shared with the all Members and also published on the CNR website in the page related to IUGS;
4. Selection of interesting news from the IUGS e-Bulletin published in 2017 and sent to the IUGS national community.
5. circular communication concerning the publication of the volume «Resilience of the cities of art to earthquakes», containing the Proceedings of the Lincei Conferences 306 - XXXIII Environmental Day, November 2015 with speech also of the Commission member.

8. Conclusions

The widespread perception in the Italian Earth Sciences community is that IUGS plays a fundamental role in defining the *geostandards* used by the global geological community (stratigraphic and petrographic nomenclature, definition of stratotypes, laboratory constants, etc.). Not equally widespread is the knowledge of other important IUGS activities in the field of knowledge transfer, geoeducation, the promotion of geological knowledge in developing countries, as well as in some specific international research projects. The Commission could promote this knowledge in order to further stimulate Italian participation in specific projects.

Milano, 12 April 2018

