

PLACET NATURA REGI TERRAM



INTERNATIONAL  
ASSOCIATION for  
PROMOTING  
GEOETHICS

# Annual Report for the IUGS

**Chief Accomplishments 2023 and Plans 2024**

January 2024

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Website: <https://www.geoethics.org/>

Contact: Secretariat ([iapgeoethics@aol.it](mailto:iapgeoethics@aol.it); [giuseppe.dicapua@ingv.it](mailto:giuseppe.dicapua@ingv.it))

## 1. General Information

The IAPG was legally recognized as a not-for-profit organization through a public notarial deed on 21<sup>st</sup> December 2012, repertoire no. 16255, collection no. 8340, Italian Republic.

Head Office c/o:

Istituto Nazionale di Geofisica e Vulcanologia

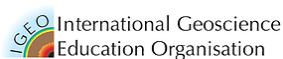
via di Vigna Murata, 605

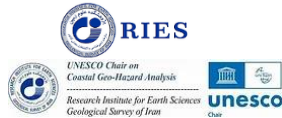
00143 Rome, Italy

The IAPG is an affiliated organization of the **International Union of Geological Sciences (IUGS)**, a member organisation of the **International Council for Philosophy and Human Sciences (CIPSH)**, an International Associate Organization of the **American Geosciences Institute (AGI)**, an Associate Society of the **Geological Society of America (GSA)**, an Associate Society of the **Geological Society of London (GSL)**, an Associate Organisation of the **Geoscience Information in Africa - Network (GIRAF)**, an Observer Organization of the **Canadian Federation of Earth Sciences (CFES)**.



The IAPG has 30 agreements of cooperation with: IUSS - International Union of Soil Sciences, EFG - European Federation of Geologists, EGS - EuroGeoSurveys, AGU - American Geophysical Union, IAH - International Association of Hydrogeologists, IAG/AIG - International Association of Geomorphologists, IUGS-IFG - Initiative on Forensic Geology, AAWG - African Association of Women in Geosciences, WOMEESA - Women in Earth and Environmental Sciences in Australasia, IAEG - International Association for Engineering Geology and the Environment, GSAf - Geological Society of Africa, GC - Geoscientists Canada, BDG - Berufsverband Deutscher Geowissenschaftler e.V., APG - Associação Portuguesa de Geólogos, ASAGAI - Asociación Argentina de Geología Aplicada a la Ingeniería, SGCh - Sociedad Geológica de Chile, GSU - Geological Society of Uganda, UCCGHA - UNESCO Chair on Coastal Geo-Hazard Analysis, Iran & RIES - Research Institute for Earth Sciences - Geological Survey of Iran, NKUA-APRL - The National and Kapodistrian University of Athens - Applied Philosophy Research Laboratory, GfGD - Geology for Global Development, JMO - Jeoloji Mühendisleri Odası (Turkish Chamber of Geological Engineers), MJD - Maden Jeologları Derneği (Turkish Association of Economic Geologists), AEG - Association of Environmental & Engineering Geologists, YES - International Network of Young and Early-Career Geoscientists, IGEO - International Geoscience Education Organisation, FCEA - Forum for Climate Engineering Assessment, SGP - Sociedad Geológica del Perú, I-GEMA - Instituto de Geociencias Y Medio Ambiente, Arequipa-Perù, ANGE - African Network for Geo-Education, GEVAS Red Argentina.





The IAPG was Global Partner of the International Year of Global Understanding (IYGU), Technical Partner of the IUGS Conference Resource for Future Generation - RFG2018, and Summit Partner of the Geoscience & Society Summit 2019.



Finally, the IAPG is partner of the AGU Ethics & Equity Center (<https://ethicsandequitycenter.org/>), supporting partner of the Earth Future Festival (EFF) (<https://www.earthfuturesfestival.com/>) and the Equality, Diversity, and Inclusion in Geoscience (EDIG) project by iCRAG (<https://www.icrag-centre.org/edig/>), and media partner of the UNESCO Lecture Series “Earth Materials for a Sustainable and Thriving Society”, co-organized by iCRAG and IUGS (<https://www.icrag-centre.org/news-and-media/conferences-and-events/earthmaterialssustainability.html>).



## 2. Overall objectives

The IAPG is a multidisciplinary, scientific network for widening discussion and creating consciousness regarding problems of ethics applied to the geosciences, in particular on the ethical, social and cultural implications of geoscience knowledge, research, practice, education and communication. Its overall objectives are:

- developing the discussion on ethical implications in research and practice of geosciences among geoscientists and into society, making geoethics an essential point of reference for any action on land, waters and atmosphere usage that all stakeholders and decision-makers must take into proper account;
- increasing the base research on geoethics and strengthening it with a scientific perspective;
- promoting geoethics values and principles through international cooperation, encouraging the involvement of geoscientists worldwide, with a special attention to those in low-income countries;
- fostering the dissemination of geoethics through websites and social networks, the publication of scientific papers, the organization of meetings and sessions/symposia on geoethics within national and international scientific events;
- encouraging the establishment of both regional and specialty groups; and
- cooperating with national and international organizations whose aims are complementary to those of the IAPG.

The achievement of the IAPG objectives will lead to the:

- identification of methods for a more effective application of geoethical values and principles in geoscience practice and research;
- reflection on the role that geoscientists can have in society and the identification of suitable forms, positions, means and actions to be adopted by them;
- growth of awareness about individual, professional, social, and environmental responsibility, both as geoscientists and as members of civil society;

- involvement of the societal communities in the idea of a common and shared “geo-heritage”, to be considered as a cultural, educational and scientific value, as well as an economic resource;
- cultural renewal in the way humans perceive and relate to the planet; and
- the sensitization towards the defense of life and the richness of the Earth.

The IAPG works to develop theoretical and practical activities covering a wide range of contents comprising: philosophy of geosciences and history of geosciences thinking; research integrity and professionalism in geosciences; working climate issues and related aspects; geoethics in georisk and disaster risk reduction; responsible georesources management; ethical and social aspects in geo-education and geosciences communication; geoethics applied to different geoscience fields including economic geology, paleontology, forensic geology and medical geology; ethical and societal relevance of geoheritage and geodiversity; sociological aspects in geosciences and geosciences-society-policy interface; geosciences for sustainable and responsible development; geoethical implications in global and local changes of socio-ecological systems; ethics in geoengineering; ethical issues in climate change and ocean science studies; ethical implications in geosciences data life cycle and big data; and ethical and social matters in the international geoscience cooperation.

### **3. Relate goals to overall IUGS scientific objectives**

The IAPG goals are strongly related to the IUGS’s aims. This is evident by comparing the IUGS and IAPG Constitutions. IAPG activities aim to encourage thought, develop ideas and to find best practice solutions regarding global issues (such as geohazards, Earth resources, climate change, geoscience communication and geo-education) with the goal to sustain Earth’s natural environment, to use all natural resources wisely and to mitigate the impacts of geohazards for the benefit of society in the attainment of their economic, cultural and social goals. Moreover, the IAPG is involved in promoting geo-education in the widest sense, facilitating interactions among geoscientists from all parts of the world, encouraging international cooperation, and fostering the dissemination of

geoethics themes in society.

#### **4. How has the organization been actively involved with IUGS related activities**

- The IAPG is the core of the newly formed IUGS Commission on Geoethics, officially established in Belfast, Northern Ireland (United Kingdom), during the 78th IUGS Executive Committee (EC) meeting. The IUGS Commission on Geoethics is the IUGS body that officially deals with geoethics and social geosciences for the Union (16 February 2023). The IAPG provides support to the financial management of the Commission's funds through its bank account and hosts internet pages of the Commission on the geoethics.org website: <https://www.geoethics.org/iugs-cg>.
- The IAPG co-sponsors the Session 1 "Geoethics at the hearth of all geoscience: serving the public good" (Convener: Silvia Peppoloni) in the theme T39 "Geoethics and Societal Relevance of Geosciences" at the 37<sup>th</sup> International Geological Congress (IGC) in Busan, Republic of Korea (25-31 August 2024): <https://www.igc2024korea.org/content/14403>.
- The IAPG co-sponsored the session "Geoethics to responsibly manage local and global challenges of our times" with the IUGS at the Australian Earth Sciences Convention (AESC) 2023, in Perth (27-30 June 2023).
- The IAPG is cooperating with the IUGS-Initiative on Forensic Geology (IFG) on the White Paper on Geoethics in Forensic Geology.
- The IAPG is collaborating with numerous geoscience organizations affiliated to the IUGS, as previously indicated in the list of agreements for cooperation (<https://www.geoethics.org/affiliations-agreements>).
- The IAPG contributed to several IUGS60 events organized by the IUGS: <https://www.iugs.org/iugs60>.
- The IAPG was partner of the Earth Future Festival (EFF), co-organized by the IUGS, that was held in 2022 (<https://www.earthfuturesfestival.com/>).
- The IAPG co-sponsored the session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?" with the IUGS at the EGU General Assembly 2022 that will be held in Vienna (23-27 May 2022) (<https://meetingorganizer.copernicus.org/EGU22/session/43042>).



- The IAPG was a media partner of the UNESCO Lecture Series “Earth Materials for a Sustainable and Thriving Society”, co-organized by iCrag and IUGS, held in 2021 (<https://www.icrag-centre.org/news-and-media/conferences-and-events/earthmaterialssustainability.html>).

## 5. Structure and organization

All the IAPG members, including officers, are volunteers.

The bodies of the Association are the:

- 1) Executive Council;
- 2) General Assembly.

The **Executive Council** (<https://www.geoethics.org/executive-council>) consists of:

- a) a President (Prof. Stefano Tinti);
- b) two Vice-Presidents (Dr. Peter T. Bobrowsky; Dr. Shrikant Limaye);
- c) a Secretary General (Prof. Silvia Peppoloni);
- d) a Treasurer (Dr. Giuseppe Di Capua);
- e) six Continental Coordinators (Prof. Vincent Cronin – North America, Prof. Roberto Greco – South America, Dr. Nic Bilham – Europe, Prof. Ezzoura Errami – Africa, Dr. Meng Wang – China, Dr. Margaret Brocx – Oceania).

The **General Assembly** (<https://www.geoethics.org/ga>) consists of all the IAPG members.

The 1<sup>st</sup> General Assembly was held in Cape Town (South Africa) at the 35<sup>th</sup> IGC (31 August 2016). The 2<sup>nd</sup> General Assembly was to be held in Delhi (India) at the 36<sup>th</sup> IGC (March 2020). Unfortunately it has been postponed to the 37<sup>th</sup> IGC (August 2024) due to the SARS-CoV-2 pandemic.

The membership to the IAPG is free. Applicants need to complete an online form at <https://www.geoethics.org/membership>, or send their data via email to the IAPG Secretariat. Currently the **IAPG network** comprises **3130 members** from **130 countries** on **5 continents**.

The IAPG is also represented in **35 countries** through **national sections**

(<https://www.geoethics.org/sections>) (coordinators in brackets): **Afghanistan** (Mohammad Salem Hussaini and Asadullah Farahmand), **Argentina** (Elizabeth I. Rovere and Roberto A. Violante), **Bangladesh** (Jahangir Alam), **Bolivia** (Wilfredo Ramos Collorana), **Brazil** (Eduardo Marone), **Cameroon** (Njilah Isaac Konfor and Ndzishepngong Kelvin Ngwang), **Canada** (Paul Hubley), **Chile** (Luisa Pinto Lincoñir), **Cuba** (Yurisley Valdes Mariño), **Democratic Republic of Congo** (Jean-Robert Mweze), **Egypt** (Kholoud M. Abdelmaksoud), **France** (David Crookall), **Germany** (Simon Schneider and Dominic Hildebrandt), **Greece** (Gerassimos A. Papadopoulos and Maria V. Triantaphyllou), **India** (Surya Gupta Parkash), **Iraq** (Nawrass N. Ameen and Ameer Hayder Khalid), **Iran** (Parviz Armani), **Italy** (Silvia Peppoloni), **Jordan** (Mamoon Allan), **Lebanon** (Soumaya Ayadi-Maasri), **Malawi** (Hilton Banda Eneya), **Mexico** (Miguel Rangel Medina), **Nepal** (Shree Prasad Vista and Ranjan Kumar Dahal) **Nigeria** (Arinze Harrison Ikwumeleze), **Pakistan** (Muhammad Yaseen and Emad Ullah Khan), **Paraguay** (Moisés Alejandro Gadea Villalba), **Peru** (Pedro Isique), **Portugal** (Clara M. da Silva de Vasconcelos and Paulo Emanuel Talhadas Ferreira da Fonseca), **Romania** (Antoneta Seghedi and Ilies Dorina Camelia), **Spain** (Domingo A. Martín Sánchez), **Turkey** (Yüksel Örgün Tutay and Dündar Çağlan), **Ukraine** (vacant after Yuriy Kostyuchenko passed away on 16 March 2023), **United Kingdom** (Antony Benham), **USA** (Cindy M. Palinkas and David Mogk), and **Uruguay** (Leda Sánchez Bettucci).



The IAPG relies on a **Board of Experts (BE)** (<https://www.geoethics.org/experts>) on specific issues related to geoethics. The BE serves the important practical function of proposing themes, articles, and initiatives to our community. The BE is interested in Earth sciences and humanities and in promoting issues on geoethics and the IAPG. Currently the board includes **15 experts**: Martin Bohle, Germany (topic: **Exploring Societal Frameworks of the Earth Sciences**); Elizabeth Silva, Portugal (topic: **Geoethics and Geoparks**); Robert Frodeman, USA (topic: **Geoethics and Philosophy**); Madhumita Das, India (topic:

**Geoethical aspects in low-income countries);** Juan Carlos Gutierrez-Marco (topic: **Geoethics in Paleontology**), Christine McEntee, USA (topic: **Harassment and Discrimination in Geosciences**); Iain Stewart, United Kingdom (topic: **Geoscience Education and Communication**); Mike Buchanan, United Kingdom (topic: **Geoethics in Speleology**), Edmund Nickless, United Kingdom (topic: **Geoethics for Society**); David Mogk, USA (topic: **Geo-education and Teaching Geoethics**); Ruth Allington, United Kingdom (topic: **Geoscience Professionalism**), Luis González de Vallejo, Spain (topic: **Geoethics in Engineering Geology**); Manuel João Florentino Gomes Abrunhosa, Portugal (topic: **Geoethics in Groundwater Management**), Tony Mayer, United Kingdom (topic: **Research Integrity**); and **Ciro Manzo, Italy (topic: Geoethics and young geoscientists).**

In 2020, the IAPG established the **Early Career Scientists Team (ECST)** (<https://www.geoethics.org/ecst>), replacing the **Young Scientists Club (YSC)** that was active from 2015 to 2019. The ECST has the following goals:

1. Promoting geoethics and the IAPG, with a special target focused on younger and early career scientists/professionals;
2. Working as the interface between IAPG and young/early career scientists' organizations and groups.
3. Starting to self-train a group of geoscientists that would be able to bring the reins of the IAPG into the future and able to continue to develop geoethical thinking, by following multi and transdisciplinary approaches.

The IAPG considers the ECST as its outpost and one of its greater strengths. The IAPG believes that early career and young scientists can indicate needs and expectations on the future of geosciences. They can help to give a perspective that is updated and adheres to the new challenges that geoscientists have to face. They can also report new instances from society, identifying the potential innovative contributions that geosciences can provide to society.

The 8 members of the ECST Board are early career scientists/professionals and members of the IAPG: **Daniel DeMiguel**, Spain (Spokeperson); **Ndivhuwo Cecilia Mukosi**, South Africa; **Cristina Toma**, Romania; **Sebastian Handl**, Austria; **César Oboni**, Canada; **Bárbara Zambelli**, Brazil; **Alexandra Cardoso**, Portugal; and **Jonathan Rizzi**, Italy/Norway.

On 4 June 2020, **Vitor Correia** (Portugal) was appointed **IAPG Delegate** for Relationships with European Organizations (<https://www.geoethics.org/delegates>). Delegates are IAPG key-officers, whose aim is to create opportunities for the IAPG in order to facilitate, in specific contexts, projects, initiatives, activities, agreements with other organizations that have the development and promotion of geoethics as their main focus.

On 8 May 2017, the IAPG nominated the **Task Group on Responsible Mining – TGRM** (<https://www.geoethics.org/tgrm>), formed by Nikolaos Arvanitidis (Sweden), Jan Boon (Canada), Pekka Nurmi (Finland), and Giuseppe Di Capua (Italy). The goal of the Task Group has been to draft a document on “Responsible Mining”, on values and concepts that should be considered in mining, including their importance for future generations in the perspective of a sustainable development of our societies. On 1 December 2017, the IAPG Executive Council approved the “White Paper on Responsible Mining” (<https://www.geoethics.org/wp-responsible-mining>), prepared by the Task Group following a review by an International Panel of Experts comprising Vitor Correia (Portugal), Roberto Lencina (Argentina), David Ovadia (United Kingdom), Mark Rachovides (Canada), and Ian Thomson (Canada). Unfortunately in 2020 Jan Boon, one of the members of the Task Group and co-author of the White Paper, passed away. Moreover another member, Pekka Nurmi, decided to leave the Task Group after his retirement. On 22 December 2020, the TGRM was renewed and 6 members were appointed: **Marita Ahumada** (Argentina); **Estelle Levin-Nally** (United Kingdom); **Vitor Correia** (Portugal); **Roberto Lencina** (Argentina); **Nikolaos Arvanitidis** (Sweden); and **Giuseppe Di Capua** (Italy).

On 26 October 2020, the IAPG has established the **Task Group on Geoethics and Geoheritage – TGGG** (<https://www.geoethics.org/tggg>), comprising 4 members: **José Brilha** (Portugal); **David W. Mogk** (USA); **Silvia Peppoloni** (Italy); and **Giuseppe Di Capua** (Italy). The goal of the Task Group is to draft a document on “Geoethics and Geoconservation”, focused on values and concepts to be considered within the geoscience community and society as a whole, related to geoconservation, geoheritage, geodiversity, geoparks, and geotourism, according to principles of responsibility and

dignity, in the perspective of responsible development and nature conservation.

On 5 October 2018, the IAPG, jointly with the IFG – Initiative on Forensic Geology of the IUGS, and established the **Task Group on Geoethics in Forensic Geology - TGGFG** (<https://www.geoethics.org/tggfg>), comprising 3 members: **Lorna Dawson** (United Kingdom); **Silvia Peppoloni** (Italy); and **Rosa Maria Di Maggio** (Italy). The goal of the Task Group is to draft a White Paper on “Geoethics in Forensic Geology,” in order to define ethical values in the applications and best practices of Forensic Geology across the world.

On 21 June 2021, the IAPG has established the **Task Group on Responsible Speleology - TGRS** (<https://www.geoethics.org/tgrs>), currently comprising 3 members: **Mike Buchanan** (United Kingdom); **Oana T. Moldovan** (Romania); and **Aleksandar Antić** (Serbia). On 30 August 2022, the IAPG Executive Council approved the “White Paper on Responsible Speleology” (<https://www.geoethics.org/wp-responsible-speleology>), prepared by the Task Group following a review by an International Panel of Experts comprising **Caroline Lessio Cazarin** (Brazil), **Murray Macgregor** (South Africa), **Peter T. Bobrowsky** (Canada), and Other Anonymous Experts.

On 20 July 2019, the **School on Geoethics and Natural Issues** (named “Schola”: <https://www.geoethics.org/geoethics-school>) was officially founded by **Peter T. Bobrowsky** (Canada), **Giuseppe Di Capua** (Italy), and **Silvia Peppoloni** (Director of the “Schola”, Italy), with the aim to provide excellent education in geoethics.

From 1 January 2021, the IAPG supports the **Journal of Geoethics and Social Geosciences (JGSG)**, a new international scientific journal founded by the Istituto Nazionale di Geofisica e Vulcanologia – INGV (National Institute of Geophysics and Volcanology, Rome, Italy). The editor-in-chief is **Silvia Peppoloni** (IAPG Secretary General), who proposed the editorial project of this new scientific journal together with **Giuseppe Di Capua** (IAPG Treasurer) to the President of the INGV in 2021. The journal is operative from 2022 and published its first article on 14 December 2022. JGSG website: <https://www.journalofgeoethics.eu/>. As of the drafting date of this report, the JGSG has

published 5 articles, while another 6 articles have been rejected.

## **6. Interaction with other national/international organizations and projects**

The IAPG cooperates or cooperated with the following organizations (<https://www.geoethics.org/links>):

- African Association of Women in Geosciences (AAWG);
- African Geoparks Network (AGN);
- African Network for Geo-Education (ANGE);
- American Geophysical Union (AGU);
- American Geosciences Institute (AGI);
- Associação Portuguesa de Geólogos (APG);
- Asociación Argentina de Geología Aplicada a la Ingeniería (ASAGAI);
- Association of Environmental & Engineering Geologists (AEG);
- Berufsverband Deutscher Geowissenschaftler e.V. (BDG);
- Canadian Federation of Earth Sciences (CFES);
- Chair on Geoethics of the CIPSH (CHIPS-CG);
- Commission on Geoethics of the IUGS (IUGS-CG);
- Earth Future Festival (EFF);
- EuroGeoSurveys (EGS);
- European Association for the Conservation of Geological Heritage (ProGEO);
- European Federation of Geologists (EFG);
- European Geosciences Union (EGU);
- Forum for Climate Engineering Assessment (FCEA);
- GSAf - Geological Society of Africa (GSAf)
- Geological Society of America (GSA);
- Geological Society of Chile (SGCh-Sociedad Geológica de Chile)
- Geological Society of London (GSL);
- Geological Society of Peru (SGP-Sociedad Geológica del Perú);
- Geological Society of Uganda (GSU);

- Geology for Global Development (GfGD);
- Geology in the Public Interest (GPI);
- Geoscience Information in Africa - Network (GIRAF);
- Geoscientists Canada/Géoscientifiques Canada (GC);
- GEVAS Red Argentina;
- Global Geoscience Professionalism Task Group (IUGS-TGGGP);
- Initiative on Forensic Geology of the IUGS (IUGS-IFG).
- Instituto de Geociencias Y Medio Ambiente, Arequipa-Perù (I-GEMA);
- International Association for Engineering Geology and the Environment (IAEG);
- International Association for Geoscience Diversity (IAGD);
- International Association of Geomorphologists (IAG/AIG);
- International Association of Hydrogeologists (IAH);
- International Council for Philosophy and Human Sciences (CIPSH);
- International Geoscience Education Organisation (IGEO);
- International River Foundation (IRF);
- International Union of Geological Sciences (IUGS);
- International Union of Soil Sciences (IUSS);
- International Year of Global Understanding (IYGU);
- Italian Geological Society (SGI-Società Geologica Italiana);
- Research Institute for Earth Sciences – Geological Survey of Iran (RIES);
- Resources for Future Generations Conference (RFG 2018);
- Science Education Resource Center (SERC);
- South Asian Association of Women Geoscientists (SAAWG);
- The Turkish Chamber of Geological Engineers (JMO-Jeoloji Mühendisleri Odası);
- The National and Kapodistrian University of Athens - Applied Philosophy Research Laboratory (NKUA-APRL);
- Turkish Association of Economic Geologists (MJD-Maden Jeologları Derneği);
- UNESCO Chair on Coastal Geo-Hazard Analysis, Iran (UCCGHA);
- Young Earth-Scientists (YES) Network;
- Women in Earth and Environmental Sciences in Australasia (WOMEESA);
- World Conferences on Research Integrity (WCRI).

The IAPG is/was involved in the following international and national projects:

- **SSH CENTRE** project “An indicator for local knowledge and epistemic justice in climate policy.” This project started in 2023. SSH CENTRE is a Horizon Europe project representing the cross-European Centre of Research Excellence for Climate-Energy-Mobility Social Sciences & Humanities (SSH).
- **ERG** - Educational Resources on Geoethics: IAPG is partner of the project. This project started in 2022.
- **GOAL** - Geoethics Outcomes and Awareness Learning: IAPG was a partner of the project (website: <https://goal-erasmus.eu/>). This project ended in 2020.
- **INTERMIN** - International Network of Raw Materials Training Centres: IAPG was member of the International Advisory Board of the project (website: <http://interminproject.org/>). This project ended in 2021.

The IAPG did not receive funds from the ERG and GOAL projects. The IAPG representative in the project INTERMIN and of the SSH CENTRE received/will receive only a reimbursement for participation in the project meetings.

## 7. Chief products

### SCHOOL ON GEOETHICS AND NATURAL ISSUES

The School on Geoethics (the “Schola”) was founded on **20 July 2019**. The founding members are Peter Bobrowsky, Giuseppe Di Capua, and Silvia Peppoloni (Director of the “Schola”). The “Schola” is a place for teaching and learning of the principles and values of geoethics in the light of the philosophy and history of Earth sciences. The intent is to provide background knowledge and the evaluation skills necessary to understand the complex relationship between human action on ecosystems and the decisions geoscientists make in the discipline that impact society, including improving the awareness of professionals, students, decision-makers, media operators, and the public on an accountable and ecologically sustainable development. The “Schola” aims to provide excellent education in geoethics, thus promoting the development of a scientific



and critical attitude to the knowledge of the Earth and its constituent systems, by fostering a growth of awareness and responsibility towards the planet, education in the values and actions underlying a respect for ecosystems, including responsible use of resources, management of natural risks, reduction of pollution and its repercussions on human health and climate, adaptation to environmental changes, in view of an accountable and ecologically sustainable development. More information and online educational resources are available at <https://www.geoethics.org/geoethics-school>.

### SPRINGERBRIEFS SERIES IN GEOETHICS

SpringerBriefs in Geoethics (<https://www.geoethics.org/springerbriefs-geoethics>) was launched on **14 June 2019**. It envisions a series of publications that aim to discuss ethical, social, and cultural implications of geosciences knowledge, education, research, practice and communication. The intention is to present concise summaries of cutting-edge theoretical aspects, research, practical applications, and case-studies across a wide spectrum. SpringerBriefs in Geoethics are seen as complementing monographs and journal articles, or developing innovative perspectives with compact volumes of 50 to 125 pages in length, covering a wide range of contents on geoethics. This Series in Geoethics was initiated and supervised by Silvia Peppoloni (editor-in-chief, Italy) and an editorial board consisting of Nic Bilham (United Kingdom), Peter Bobrowsky (Canada), Vincent S. Cronin (USA), Giuseppe Di Capua (Italy), Rika Preiser (South Africa), Artur Agostinho de Abreu e Sá (Portugal), and Iain Stewart (United Kingdom). The SpringerBriefs in Geoethics published 3 books.

### BOOKS AND SPECIAL ISSUES

- Book: Di Capua G. and Oosterbeek L., eds. (2023). *Bridges to Global Ethics: Geoethics at the Confluence of Humanities and Sciences*. SpringerBriefs in Geoethics, Springer, Cham, pp. VII+115. <https://doi.org/10.1007/978-3-031-22223-8>.
- Book: Alonso R.N., Rovere E.I., Violante R. et al. (2023). *Importancia de las Geociencias en el Ámbito Social*. Mundo Gráfico Salta Editorial, pp. 300. <https://catalogomundoeditorial.com/#!/producto/294/>.

- Book: Peppoloni S. and Di Capua G. (2022). *Geoethics: Manifesto for an Ethics of Responsibility Towards the Earth*. Springer, Cham, pp. XII+123. <https://doi.org/10.1007/978-3-030-98044-3>.
- Special issue: Peppoloni S. and Di Capua G., eds. (2022). *New Advances on Geoethics and Sustainable Development*. Special Issue, Sustainability. [https://www.mdpi.com/journal/sustainability/special\\_issues/geoethics](https://www.mdpi.com/journal/sustainability/special_issues/geoethics).
- Book: Di Capua G., Bobrowsky P.T., Kieffer S.W., and Palinkas C., eds. (2021). *Geoethics: Status and Future Perspectives*. Geological Society, London, Special Publication, 508, pp. VIII+311. <https://doi.org/10.1144/SP508>.
- Bohle M. and Marone E., eds. (2021). *Geo-societal Narratives - Contextualising geosciences*. Palgrave Macmillan, Cham, pp. XXV+221. <https://doi.org/10.1007/978-3-030-79028-8>.
- Book: Peppoloni S. e Di Capua G. (2021). *Geoetica: Manifesto per un'Etica della Responsabilità verso la Terra*. Prefazione di Telmo Pievani. Saggine, n. 346, pp. 224, Donzelli Editore, ISBN 978-8855221696. <https://www.donzelli.it/libro/9788855221696>.
- Book: Abrunhosa M., Chambel A., Peppoloni S., and Chaminé H.I., eds. (2021). *Advances in Geoethics and Groundwater Management: Theory and Practice for a Sustainable Development - Proceedings of the 1st Congress on Geoethics and Groundwater Management (GEOETH&GWM'20), Porto, Portugal 2020*. Springer International Publishing, pp. XXXI+715. <https://doi.org/10.1007/978-3-030-59320-9>.
- Book: Peppoloni S. (2021). *Pianeta Terra*. ReWriters MagBook. <https://shop.rewriters.it/product/rewriters-05-2021-pianeta-terra/>.
- Special volume: Chaminé H.I., Abrunhosa M., Barbieri M., Naves A., Errami E., Aragão A. and Di Capua G., eds. (2021). *Hydrogeoethics in Sustainable Water Resources Management Facing Water Scarcity in Mediterranean and Surrounding Regions*. Mediterranean Geoscience Reviews, Volume 3, issue 3, <https://link.springer.com/journal/42990/volumes-and-issues/3-3>.
- Book: Joel C. Gill and Martin Smith, eds. (2021). *Geosciences and the Sustainable Development Goals*. Springer, pp. XXXIII+474. <https://doi.org/10.1007/978-3-030-38815-7>.

- Book: Vasconcelos C., Schneider-Voß S., and Peppoloni S., Eds. (2020). *Teaching Geoethics - Resources for higher education*. U.Porto Edições, pp. 207. <https://doi.org/10.24840/978-989-746-254-2>.
- Book: Boon J. (2020) *Relationships and the Course of Social Events During Mineral Exploration - An Applied Sociology Approach*. SpringerBriefs in Geoethics, Springer International Publishing, pp. XIX + 125. <https://doi.org/10.1007/978-3-030-37926-1>.
- Book: Bohle M., ed. (2019). *Exploring Geoethics: Ethical Implications, Societal Contexts, and Professional Obligations of the Geosciences*. Palgrave Pivot, Cham, pp. XIV+214. <https://doi.org/10.1007/978-3-030-12010-8>.
- Special volume: Peppoloni S., Di Capua G., Bobrowsky P., and Cronin V., eds. (2017). *Geoethics at the heart of all geoscience*. Annals of Geophysics, Vol. 60, Fast Track 7, <http://www.annalsofgeophysics.eu/index.php/annals/issue/view/537>.
- Book: Gundersen L.C., ed. (2017). *Scientific Integrity and Ethics in the Geosciences*. pp. XI+327, American Geophysical Union, Wiley, Special Publications 73. <https://doi.org/10.1002/9781119067825>.
- Book: Peppoloni S. and Di Capua G., eds. (2015). *Geoethics: the Role and Responsibility of Geoscientists*. Geological Society, London, Special Publications, 419. <https://doi.org/10.1144/SP419.0>.
- Book: Wyss M. and Peppoloni S., Eds. (2014). *Geoethics: Ethical Challenges and Case Studies in Earth Sciences*. Elsevier, pp. 450. <https://doi.org/10.1016/C2013-0-09988-4>.
- Book: Lollino G., Arattano M., Giardino M., Oliveira R., and Peppoloni S., Eds. (2014). *Engineering Geology for Society and Territory - Volume 7: Education, Professional Ethics and Public Recognition of Engineering Geology*. Springer, Cham, pp. XV+274, <https://doi.org/10.1007/978-3-319-09303-1>.
- Special volume: Peppoloni S. and Di Capua G., Eds. (2012). *Geoethics and geological culture. Reflections from the Geoitalia Conference 2011*, Annals of Geophysics, Vol. 55, No 3. <http://www.annalsofgeophysics.eu/index.php/annals/issue/view/482>.

#### REFERENCE DOCUMENTS

- **Cape Town Statement on Geoethics:** <https://www.geoethics.org/ctsg>.  
Supported by 33 geoscience organizations (International Union of Geological

Sciences – IUGS, European Federation of Geologists – EFG, International Association of Geomorphologists – IAG/AIG, African Association of Women in Geosciences – AAWG, Women in Earth and Environmental Sciences in Australasia – WOMEEESA, Geological Society of Africa – GSAf, Young Earth Scientists Network – YES Network, International Geoscience Education Organisation – IGEO, Geology in the Public Interest – GPI, International Association for Geoscience Diversity – IAGD, EuroGeoSurveys – EGS, American Geophysical Union – AGU, American Geosciences Institute – AGI, Geological Society of America – GSA, Società Geologica Italiana-Italian Geological Society – SGI, Berufsverband Deutscher Geowissenschaftler e.V. – BDG, Sociedad Geológica del Perú-Geological Society of Peru – SGP, Geological Society of Uganda – GSU, Instituto Geológico, Minero y Metalúrgico, Peru – INGEMMET, International Association of Hydrogeologists – IAH, Sociedad Geológica de Chile-Geological Society of Chile – SGCh, Turkish Association of Economic Geologists-Maden Jeologları Derneği – MJD, The Turkish Chamber of Geological Engineers-Jeoloji Mühendisleri Odası – JMO, Geology for Global Development – GfGD, International Association for Engineering Geology and the Environment – IAEG, Asociación Argentina de Geología Aplicada a la Ingeniería – ASAGAI, Associação Portuguesa de Geólogos-Portuguese Association of Geologists – APG, Hrvatsko Geološko Društvo (Croatian Geological Society) – HGD, UNESCO Chair on Coastal Geo-Hazard Analysis – UCCGHA, Research Institute for Earth Sciences Geological Survey of Iran – RIES, South Asian Association of Women Geoscientists – SAAWG, Instituto de Geociencias Y Medio Ambiente, Arequipa-Perù – I-GEMA, and African Network for Geo-Education – ANGE.

Available in 36 languages: Afrikaans, Albanian, Arabic, Armenian, Belarusian, Bengali, Croatian, Czech, Danish, Dutch, English, French, Georgian, German, Greek, Hindi, Hungarian, Italian, Japanese, Korean, Mandarin Chinese, Nepali, Norwegian, Persian, Portuguese, Romanian, Russian, Sepedi, Serbian, Slovenian, Spanish, Swahili, Tamil, Turkish, Ukrainian, and Urdu.

- **Geoethical Promise:** <https://www.geoethics.org/geopromise>.

Supported by 33 geoscience organizations and available in 36 languages (see above).

- **White Paper on Responsible Speleology:** <https://www.geoethics.org/wp-responsible-speleology>.
- **White Paper on Responsible Mining:** <https://www.geoethics.org/wp-responsible-mining>. Available in 3 languages: English, Greek, and Swedish.

#### INTERNATIONAL SURVEY ON GEOETHICS: ONLINE QUESTIONNAIRE

International survey geoscience, partially funded by the IUGS – International Union of Geological Sciences, on the community's perception and awareness on the importance of the ethical and social aspects of geoscience research and practice. The questionnaire covers the following topics: Research integrity and professionalism in conducting geoscience activities; Respect towards colleagues and appropriate behaviours in the working environment; Conflicts of interest; Awareness of geoscientists' responsibilities towards society in the dissemination of scientific results, in geoscience communication and geo-education activities; Roles and responsibilities of geoscientists in the decision-making process; Relationship between the geoscience community and stakeholders; Responsibilities of geoscientists towards the Earth system.

413 questionnaires were received by 31 December 2020.

Link: <https://form.jotformeu.com/93223788145362>.

#### VIDEOS, INTERVIEWS AND ARTICLES FOR NEWSPAPERS AND MAGAZINES

- 43 videos uploaded on the YouTube channel of the IAPG:  
<https://www.youtube.com/user/iapgeoethics/videos>
- Articles on geoethical issues for the Italian newspapers “Corriere della Sera” and “Il Sole24Ore”, for the Italian Magazines “112 Emergencies” and “MicroMega, La Mela di Newton”, and for the blog “Storie di Gea” in the magazine ReWriters (by Silvia Peppoloni, IAPG Secretary General);
- Article on geoethics for the online magazine “Human Futures” (by Martin Bohle, Silvia Peppoloni, Eduardo Marone, IAPG officers);
- 7 radio and video interviews with the IAPG President, Secretary General and IAPG members for the:

- Minigeology, subject “Geoethics: interview to Peter Bobrowsky”, by Daniel Minisini:  
<https://youtu.be/jf4RM8YGa8Y>;
- Swiss Radio Network 2, subject: “Prevention and Geoethics”, by Matteo Martelli;
- Austrian Radio (ORF1) program on Geoethics: “Dimensionen - die Welt der Wissenschaft: Was soll ich tun - global gesehen? Die Ethik in den Geowissenschaften” (“Dimensions - the world of science: What should I do - a global perspective? The Ethics in the geosciences”), by Wolfgang Däuble:  
<http://oe1.orf.at/programm/404157>;
- German Radio (SWR2), title “Endgültig freigesprochen: Das Erdbeben von L’Aquila und die ethische Verantwortung der Geowissenschaftler. Gespräch mit Silvia Peppoloni, International Association for Promoting Geoethics, Rom. (Finally acquitted: The L’Aquila earthquake and the ethical responsibility of geoscientists. Interview with Silvia Peppoloni, International Association for Promoting Geoethics, Rome). Redaktion / Moderation: Gabor Paal;
- Italian Radio Television Network (RAI), subject: culture of prevention. The interview begins from minute 16:30: <http://www.raiscuola.rai.it/articoli/nautilus-seguendo-il-tempo/26025/default.aspx>;
- Italian Radio Television Network (RAI), Radio3 Scienza, subject: Natural risks;
- Science Festival in Genoa (Italy):  
Part 1 [https://www.youtube.com/watch?v=Xt0\\_Z6mAGel&list=UUP-Fngse1pu9sFvyBgN3AzQ](https://www.youtube.com/watch?v=Xt0_Z6mAGel&list=UUP-Fngse1pu9sFvyBgN3AzQ)  
Part 2 <https://www.youtube.com/watch?v=M2aYspo0p5Y&feature=youtu.be>.

Many scientific PAPERS/CHAPTERS on geoethics have been included in the books mentioned above. About 300 papers/chapters on geoethics (with a peer-review process) have been published since 2012.

ORAL AND POSTER PRESENTATIONS in scientific sessions, courses, meetings: EGU General Assembly (2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023), IGC – International Geological Congress (2012, 2016, 2022), XVI Chilean Geological Congress (2023), AESC – Australian Earth Sciences Convention (2023), CIPSH Third

Conference on Global Ethics (2023), 5G & SDGs - 1st International Congress on Geodiversity, Geoheritage, Geotourism, Geoeducation, Geoparks & Sustainable Development Goals (2023), GESSS-SA - Australia's Earth Science Student Symposium (2023), NatHaz - International Workshop on Natural Hazards (2022), CGEO Conference (2022), DDE Open Science Forum (2022), IUGS60 webinars (2022), International Summer University of the UNESCO Chair on Geoparks, Sustainable Developments and Healthy Lifestyles (2022), AGU Chapman Conference (2022), GeoMinKöln (2022), First Brazilian Meeting of Geoethics in Brazil (2022), Geoethics & Groundwater Management Congress in Porto (2020), International (Virtual) Symposium on Geoethics (2020), Congress of the Italian Geological Society (2016, 2018), GeoBerlin (2023), Geoitalia conference (2013), IAEG Congress (2014), GSA Annual Meeting (2014, 2015), AGU Fall Meeting (2014, 2015, 2016, 2017, 2018), CIPSH Humanities Seminar (2021), Bolivian Geological Congress (2021), Symposium of the Geology of Chile (2021), CIPSH European Humanities Conference (2021), Resources for Future Generations Conference - RFG (2018), WCRI (2013, 2015), AGU-GAC-MAC-CGU Joint Assembly (2015), AGU Geoscience and Society Summit (2019), International Congress of the Geological Society of Greece (2019), Argentine Geological Congress (2017, 2022), Geological Congress of Spain (2016), Peruvian Congress of Geology (2016), CAAWG - Conference of the African Association of Women in Geosciences (2016, 2018), Nigeria Geoethics Conference (2018), Simposio de Paleontología del Perú (2018), Jornadas Científicas sobre Geología del Paraguay y Ciencias Afines (2018), EADI NORDIC Conference (2017), GeoSciEd (2018), EnsinoGEO (2018), General Assembly of the European Seismological Commission - ESC (2018), GeoKarlsruhe (2021), PGO - Professional Geoscientists Ontario Virtual Symposium (2020, 2021), GfGD Annual Conference (2018), Earth System Governance Conference (2018), AAAS meeting (2019), Geoconvention, Canada (2019), EFG Workshop (2014), 6<sup>th</sup> Meggen Raw Material days (2020), EFG-UNECE Conference (2017), Foro Internacional sobre Gestión del Riesgo Geológico - International Forum on Geological Risks Management (2015), Future Earth international symposium in Japan (2017), International Conference of the Institute of African Research and Studies - IARS in Egypt (2016), Colloquium on Geoethics in Peru (2015), Conference of the African Association of Women in Geosciences Nigeria (2015), OTC Conference in Houston (2014), SERC workshop in Montana (2014), AEG course in

Texas (2014), Geological Society of London, Regional Group – Lecture (2017), CNG course in Italy (2014), Science Festival in Genoa, Italy (2013, 2014), Bioethics Festival, Italy (2019), Mercator Research Institute on Global Commons and Climate Change – MCC meeting (2019), Meeting: nANO meets water VII meeting in Germany (2016), South Texas Geological Society meeting (2016), Ocean Sciences Meeting – OSM (2016, 2018), IAH Congress (2018), CoV-9: Cities on Volcanoes in Chile (2016, 2018), Workshop on Geoethics in Nigeria (2016), Chilean Geological Congress (2018), Colombian Conference of Geology (2015), International Conference of Underground Construction (2015), Geological Conference of Central America (2015), Salzburg Global Seminar (2018), FORAM 18 pilot event on raw materials governance (2018), National Congress of the Italian Environment Fund – FAI (2017), GOAL workshop/meeting (2018, 2019, 2020), INTERMIN Meeting (2018, 2019), and WISE Multiplier Event (2017).

### MINERLIMA

International Exhibition of Minerals (Feria Internacional de Minerales) in Peru, conceived and organized by IAPG-Peru from 2015, in cooperation with numerous Peruvian organizations and institutions. Events planned: short courses, conferences and workshops (for children and the general public), showcase (exhibition-sale of mineral samples), geological excursions and guided tours. The 9<sup>th</sup> edition was held in 2023. The 10<sup>th</sup> edition is scheduled in 2024.

Website: <https://minerlima.wixsite.com/minerlima>

### WEBSITE AND SOCIAL NETWORKS

- **Official Website:** <https://www.geoethics.org>
- **New Blog** (from 29 June 2022): <https://www.geoethics.org/blog>
- **Old Blog** (till 29 June 2022): <http://iapgeoethics.blogspot.com>
- **Linkedin Group** “Geoethics and Culture of Geosciences” (3946 members):  
<https://www.linkedin.com/groups/4615518>
- **Facebook Page:** <https://www.facebook.com/iapg.geoethics/> (9401 followers)
- **Twitter Page** (@IAPGeoethics): <https://twitter.com/IAPGeoethics> (3253 followers)



- **YouTube channel:** <https://www.youtube.com/user/iapgeoethics/videos> (193 registered followers)
- **Photo gallery on Flickr:** <https://www.flickr.com/photos/125283529@N05/sets/>
- Other IAPG national sections webpages at: <https://www.geoethics.org/sections.html>

Since 2012, thousands of posts have been published on the IAPG website, blog, and social networks regarding articles, news, call for abstracts, meetings-conferences, seminars, events and other kinds of information on geoethics.

#### LECTURES, SEMINARS, CONFERENCES (onsite and/or online)

- Inaugural Plenary Lecture by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) entitled "**Geoethics, geosciences and global anthropogenic impacts**" at the XVI Chilean Geological Congress (Santiago, Chile, 26 November 2023).
- Lectures by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) and Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) in the workshop organized by IAPG-Chile and the Geological Society of Chile titled: "**What is Geoethics**" at the XVI Chilean Geological Congress (Santiago, Chile, 26 November 2023).
- Invited-Speech by Roberto Lencina (Councillor of the IUGS Commission on Geoethics) entitled "**The geoethical dilemmas associated with mineral resources and the energy transition**" in a webinar organized by the Universidad Nacional de Río Negro (UNRN), Patagonia (Argentina, 7 November 2023).
- Keynote speech by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) entitled "**Geoheritage, geodiversity and geotourism through the lens of geoethics**" at the 1st International Congress on Geodiversity, Geoheritage, Geotourism, Geoeducation, Geoparks & Sustainable Development Goals (5G & SDGs) (Safi, Morocco, 24 October 2023).

- Introductory speech by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) entitled **"Ethical and societal relevance of geodiversity, geoheritage, and geoconservation: the geoethical perspective"** in the conference organized by IAPG India, in cooperation with the National Institute of Disaster Management, India, to celebrate the 7th edition of the International Geoethics Day (India, 14 October 2023).
- Keynote speech by Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) entitled **"Building New Perspectives for Human Progress Through Geoethics"** in the workshop organized by the Geological Survey of India to celebrate the 7th edition of the International Geoethics Day and the 2nd edition of the International Geodiversity Day (India, 13 October 2023).
- Invited-Speech by Surya Parkash (IAPG-India Coordinator) entitled **"Geoethics in the Indian Context"** at the event organized by the Indian National Science Academy to celebrate the International Geodiversity Day 2023 in India (New Delhi, India, and Online, 6 October 2023).
- Lectures by Silvia Peppoloni (IAPG Secretary General; Chair of the IUGS Commission on Geoethics) and Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) in the course organized by the Geological Society on London titled: **"Online Training: Exploring Geoethics: Ethics of Responsibility Towards the Earth System"** (UK, 26 September-10 October 2023).
- Invited-Speech by Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) entitled **"Etiology of the Ecological Crisis: Building New Perspectives for Human Progress Through Geoethics"** in the Session "Ecology and (global) ethics" at the Symposium "The quest for global ethics: researchers in dialogue" of the Stockholm University (Stockholm, Sweden, 14 September 2023).
- Invited-Speech by Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) entitled **"Etiology of the Ecological Crisis: Building New Perspectives for Human Progress Through Geoethics"** in the Session 2 "How can a global geoethics and a new technoethics grounded in various ethical traditions help us resist threats to a

sustainable future?" at the Third CIPSH Conference on Global Ethics (Stockholm, Sweden, 12 September 2023).

- Invited-Speech (in Persian) by Parviz Armani (IAPG-Iran Coordinator) entitled "**The International Association for Promoting Geoethics**" in a seminar and webinar at the Research Institute for Earth Sciences - Geological Survey of Iran (Tehran, Iran, 30 July 2023).
- Invited-Speech (in Portuguese) by Manuel Abrunhosa (IAPG Board of Experts) entitled "**Groundwater in the Sustainability of 21st Century Cities**" in the webinar series organized by the Associação Portuguesa de Geólogos (APG) (Portugal, 14 June 2023).
- Invited-Speech (in Italian) by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) entitled "**Geoethics: rewriting the relationship that binds us to the Earth**" at the Conference "Geoethics: Reflections on the Etna area and the human being-environment relationship" within the Etna Biodiversity Festival (Milo, Italy, 26 May 2023).
- Invited-Speech by Giuseppe Di Capua (Treasurer of the IAPG and IUGS Commission on Geoethics) at the Town Hall Meeting TM14: Climate change communication: What policy, education, research, geoethics and action are realistic? at the EGU General Assembly 2023 (Vienna, Austria, 25 April 2023).
- Invited-Speech by Giuseppe Di Capua (Treasurer of the IAPG and IUGS Commission on Geoethics) entitled "**The need of geoethics for society**" at the event "Café com Ciência" (Coffee with Science, Seminar Series), organized by the Centro de Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR) of the Universidade do Porto (UP) in collaboration with the Centro de Monitorização e Interpretação Ambiental (CMIA) of Matosinhos and CMIA of Vila do Conde (Portugal, 19 April 2023).
- Invited-Speech (in Italian) by Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics), entitled "**Geoethics and Anthropogenic Global Impacts: Resources, Risks, and Responsibility**", at the webinar in the seminar cycle "Sustainability, climate change and water resources" organized by the Department of Earth Sciences - University of Pisa, the Master's Degree Course in Environmental

Sciences and the Interdepartmental Research Center for the Study of the Effects of Climate Change (CIRSEC), with the patronage of the Italian Association of Environmental Sciences and the Order of Geologists of Tuscany (Italy, 23 March 2023).

- Invited talk (in Italian) by Silvia Peppoloni (INGV, Italy and IAPG Secretary General), entitled "Consapevolezza, emancipazione e responsabilità delle scienziate della Terra" (**Awareness, empowerment and responsibility of women scientists in Earth Sciences**) at the event "The Space of Science: paths and gender roles in research" organized at the University of Turin, Department of Earth Sciences, to celebrate the International Day of Women and Girls in Science. This event was supported by the IAPG (Italy, 10 February 2023).
- Webinar "**Making Groundwater Visible in Arid and Semi-Arid Regions**" to celebrate the Groundwater Summit 2022, organized by IAPG-Afghanistan, the Afghanistan Groundwater Group (AGG), the Portuguese Chapter of the IAH (AIH-GP) (Afghanistan, 1 December 2022).
- Webinar (in Greek) entitled "**Public communication of seismic hazard issues and geoethical dilemmas**", organized by IAPG-Greece and SafeGreece, Keynote speaker: Gerasimos A. Papadopoulos (IAPG-Greece Co-coordinator), Coordinator: Maria Triantaphyllou (IAPG-Greece Co-coordinator): <https://www.youtube.com/watch?v=D4Y6bEAMWfc> (Greece, 8 November 2022).
- Webinar (in Italian) entitled "**Geoethics without borders: Transdisciplinary visions for sustainability**" organized by the Department of Earth Sciences at the Turin University and IAPG-Italy/Section of Geoethics and Geological Culture of the Italian Geological Society to celebrate the International Geoethics Day 2022 (Italy, 13 October 2022).
- Invited-Speech by Vincent Cronin (IAPG Continental Coordinator for North America), entitled "**Advocating Geoethics for SFDRR, SDGs, and CCA**", at the webinar organized by the National Institute of Disaster Management, Ministry of Home Affairs, Government of India, in collaboration with the IAPG - International Association for Promoting Geoethics and Adamas University (West Bengal, India), to celebrate the International Geoethics Day 2022: <https://www.youtube.com/watch?v=CbJApd5BDuk>, from 17:09 to 37:40 (India, 13 October 2022).

- Webinar (in Spanish) on **“Geoethics”** organized by IAPG-Peru to celebrate the International Geoethics Day 2022 (Peru, 13 October 2022).
- Webinar (in Spanish) entitled **“From the contribution to the training of new generations of scientists and professionals in geosciences”** organized by IAPG-Chile (Chile, 21 September 2022).
- Online course (in Spanish) entitled **“The exercise of geoethics and deontology in geosciences”** organized by IAPG-Peru for MinerLima 2022 (Peru, 31 August – 2 September 2022).
- Webinar (in Spanish) entitled **“The relationship of geosciences with society”** organized by IAPG-Chile (Chile, 24 August 2022).
- Webinar (in Spanish) entitled **“On geoscience and its relationship with nature and culture”** organized by IAPG-Chile (Chile, 28 July 2022).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General), entitled **“Geoethics and Oceans: Challenges and Opportunities”**, 6<sup>th</sup> International Summer University (Webinar) on “Oceans, People and Cooperation for Sustainable Development” organized by the UNESCO Chair on Geoparks, Sustainable Developments and Healthy Lifestyles at the Universidade de Trás-os-Montes e Alto Douro: <https://www.youtube.com/watch?v=LsLE5a0TIWE>, from 4:23:47 to 4:50:50 (Portugal, 15 July 2022).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General), entitled **“Geosciences to achieve UN SDGs: The need for geoethics”**, at the CGEO 2022 Conference, organized by the Centro de Geociências of the Coimbra University: [https://www.facebook.com/watch/live/?ref=watch\\_permalink&v=3443079382586119](https://www.facebook.com/watch/live/?ref=watch_permalink&v=3443079382586119), from 1:54:08 to 2:28:00 (Portugal, 20 June 2022).
- Invited-Speech by Giuseppe Di Capua (IAPG Treasurer), entitled **“Ecological crisis and geosciences: the need for geoethics”**, at the “State of the Planet” event, organized by the IUGS - International Union of Geological Sciences within the initiatives to celebrate 60 years from the foundation of the IUGS (IUGS60) and the Earth Day 2022: <https://www.youtube.com/watch?v=Qnh066e9VGM> (22 April 2022).
- Online presentation (in Spanish) of the book **“Geoethics in Peru”** by Sandra Villacorta (Peru, 22 April 2022).

- Video-Lecture by Silvia Peppoloni (IAPG Secretary General), entitled **“Geoethics and Georisks: Ethical and Social Aspects in Disaster Risk Reduction”** (India, 21 April 2022).
- Invited-Speech by Manuel Abrunhosa (IAPG Board of Experts), entitled **“Geoethics and Groundwater”** at the University of Pisa (Italy, 24 March 2022).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General), entitled **“Responsible management of water: a resource that recalls us to dialogue”**, at the IUGS60 virtual event for celebrating the World Water Day 2022 (United Kingdom, 22 March 2022).
- Webinar **“Geoethics: Bridging geoSTEM and the social sciences”** at Edgeryders by Martin Bohle (IAPG Board of Experts): <https://www.youtube.com/watch?v=fxvaTezYEZw> (Belgium, 22 March 2022).
- Webinar entitled **“Making Groundwater visible in Afghanistan”** organized by IAPG-Afghanistan to celebrate the World Water Day 2022 (Afghanistan, 17 March 2022).
- Webinar (in Spanish), entitled **“2<sup>nd</sup> Conversation of Peruvian Women in Geosciences”**, organized by IAPG-Peru: <https://www.youtube.com/watch?v=dCOyDyyHWZ0> (Peru, 8 March 2022).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General) at the webinar **“Formation of Supportive Networks in the Face of Adversity”** organized by the Institute of Electrical and Electronics Engineers (IEEE) (USA, 24 February 2022).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General) at the webinar **“UN International Day of Women and Girls in Science”** organized by the IUGS – International Union of Geological Sciences (United Kingdom, 11 February 2022).
- Invited-Speech by Simon Schneider (IAPG-Germany co-coordinator), entitled **“Geoethics - Those who demand relevance must take responsibility”**, at the Geologische Gemeinschaft zu Freiberg e.V. (Germany, 26 January 2022).
- Invited-Speech by Dominic Hildebrandt (IAPG-Germany co-coordinator), entitled **“Shaping responsible future experts: the need for integrating Geoethics in Geoscience university education,”** at Geosciences Colloquium, Institute for Geoscience, Friedrich Schiller University Jena (Germany, 13 January 2022).
- Webinar: 4<sup>th</sup> Round Table in Peru, entitled **“On geoethics in Peru: Towards the development of geoethical policies”**, organized by IAPG-Peru: <https://www.youtube.com/watch?v=Z1OQPPWAeuo> (Peru, 18 December 2021).

- Invited-Speech on **geoethics** by Vince Cronin (IAPG-USA Co-coordinator) at the “International Workshop on Geoethics with focus on Geohazards and Mining Disasters”, organized by IAPG-India and NIDM - National Institute of Disaster Management:  
<https://www.youtube.com/watch?v=gPlyNf8RNzM> (India, 14 October 2021).
- Video-Lecture by Giuseppe Di Capua (IAPG Treasurer), entitled “**Geoethics: from an ethics for geosciences to a global ethics for societies**”, organized by the GeoZS - Geological Survey of Slovenia for its 75th anniversary:  
<https://www.youtube.com/watch?v=V3TiXhVQKiE> (Slovenia, 17 November 2021).
- Short Video Course on Geoethics at the EGU General Assembly 2021, organized by the IAPG:
  0. **Forewords to Honour Jan Boon** (Giuseppe Di Capua):  
<https://www.youtube.com/watch?v=piQv21HI5so>.
  1. **Theoretical foundations of Geoethics** (Silvia Peppoloni):  
<https://www.youtube.com/watch?v=Rz5yHyHjzEw>.
  2. **Responsible conduct of research and professionalism** (David Mogk):  
[https://www.youtube.com/watch?v=RZmUEyR\\_Ri8](https://www.youtube.com/watch?v=RZmUEyR_Ri8).
  3. **Development Perspectives for Geoethical Thoughts?** (Martin Bohle):  
<https://www.youtube.com/watch?v=EcCnxHblYt0>.
  4. **Education for Confronting (geo)ethical dilemmas** (Eduardo Marone):  
<https://www.youtube.com/watch?v=r5NIHyrjZX4>.
  5. **Geoethics and responsible mining** (Nic Bilham):  
<https://www.youtube.com/watch?v=Z-EuWOE-CGs>.
  6. **Geoethics in natural hazards from the perspective of an engineering geologist** (Vincent Cronin): <https://www.youtube.com/watch?v=xhyXb6WxyOw>.
  7. **Geoethics’ case studies: Paleontology and Geoheritage** (Daniel DeMiguel):  
<https://www.youtube.com/watch?v=fj3tkjPKqt0>.
  8. **Geoethics’ case studies: effects of the EU directive on conflict minerals** (Vitor Correia): <https://www.youtube.com/watch?v=16K0cG7c-h8>.

- Webinar by Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) entitled **“Introduzione alla Geoetica”** (Introduction to Geoethics) at the MUST – Department of Earth sciences of the Sapienza University of Rome: <https://www.youtube.com/watch?v=QwYsDGJRS7E> (Italy, 3 March 2021).
- Video-Lecture by John Geissman (Geoethics Medalist 2020), entitled **“Geoethics - Integrity and Ethics in Science in Higher Education”**, at the University of Potsdam (Germany): <https://youtu.be/GANbLvJ6bms> (Germany, 4 January 2021).
- Invited-Talk by Daniel DeMiguel (IAPG-ECST Spokeperson), entitled **“Geoethical issues in Palaeontology at a glance”**, at the Virtual Workshop "Palaeoethics from the Field, to the Museum, and to Publication", organized by The Palaeontological Association and hosted by the Oxford University Museum of Natural History (United Kingdom, 15 December 2020).
- Online-Talk by Luisa Pinto Lincoñir (IAPG-Chile coordinator), entitled **“Geosciences, Professional Ethics, and Sustainability”**, at the University of Chile: <https://youtu.be/XRNMFKK1wBE> (Chile, 9 December 2020).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General), entitled **“A White paper on Ethics in Forensic Geology”**, at the one day (virtual) meeting on “Forensic Geophysics and Geology”, organized by the Geological Society of London (2 December).
- Invited-Speech by Silvia Peppoloni (IAPG Secretary General), entitled **“Pandemic and Social Inequalities”**, to celebrate the World Philosophy Day of UNESCO: <https://youtu.be/81XL4eBFizY?list=PLWuYED1WVJIOyGKNfOeS9fXTPcxyVmEKm> (20 November 2020).
- Webinar on **Geoethics** organized by the Early Career Scientists Team (ECST) of the IAPG to celebrate the International Geoethics Day 2020. Speakers: officers of the IAPG and members of the ECST: <https://youtu.be/QV-qgAJPAAQ> (19 October 2020).
- Online-Talk by Francesc Bellaubi (IAPG member) entitled **“The role of Geoethics in georesources management and governance: some case studies”** at the ZEF – Center for Development Research, University of Bonn (Germany, 8 October 2020).
- Online-Seminar by Martin Bohle (IAPG Board of Experts) entitled **“Foundations & Examples for how to tackle (Geo)ethical Dilemmas”** at the Ronin Institute (USA, 16 September 2020).



- Invited Talk by Giuseppe Di Capua (IAPG Treasurer) entitled “**Geoethics - Why bother?**” at the Virtual Symposium "Exploring the Convergence of Professional Geoscience, Public Policy, Regulatory Requirements, Standards and Protection of the Public", organized by PGO - Professional Geoscientists Ontario (Canada, 7 July 2020).
- Online-Seminar by Silvia Peppoloni (IAPG Secretary General) entitled “**Geoethics and Georisks: definitions, concepts and values**”, organized by Ezzoura Errami (Dean Faculté Polydisciplinaire de Safi, Morocco, President of the AAWG - African Association of Women in Geosciences, and IAPG Continental Coordinator for Africa) (Morocco, 7 July 2020).
- Invited Talks by Giuseppe Di Capua (IAPG Treasurer) and Silvia Peppoloni (IAPG Secretary General) entitled respectively “**Promoting Geoethics worldwide: the IAPG network**” and “**From Ethics to Geoethics: definitions, values, and tools**”, organized by Surya Parkash (IAPG-India Coordinator) at the School of Earth and Environmental Science, Amity University Haryana (India, 14 June 2020).
- Opening Speech by Manuel Abrunhosa (IAPG Board of Experts) of the Geoethics & Groundwater Management (Virtual) Congress, co-organized by IAPG and IAH - International Association of Hydrogeologists: <https://youtu.be/oun00bG-ABE> (Portugal, 18 May 2020).
- Invited Speech by Silvia Peppoloni (IAPG Secretary General) for the Opening Ceremony of the Geoethics & Groundwater Management (Virtual) Congress, co-organized by IAPG and IAH - International Association of Hydrogeologists: <https://youtu.be/uyLpdTBJk98> (Portugal, 18 May 2020).
- Online-Keynote by Silvia Peppoloni (IAPG Secretary General) entitled “**Geoscientists as social and political actors**” at the Union Symposium 1 (US1) - EGU 2020: Sharing Geoscience Online: <https://www.youtube.com/watch?v=KYH9MNMQs3c> (from minute 37:23) (4 May 2020);
- Video-Pills developed by the European project “GOAL - Geoethics Outcomes and Awareness Learning”, in cooperation with the IAPG:
  - “**Introduction to geoethics: definition, concepts, and application**” (by Silvia Peppoloni, IAPG Secretary General): <https://youtu.be/NX7Gii5adKk> (March 2019);

- **“Geoethics and responsible use of geo-resources”** (by Giuseppe Di Capua, IAPG Treasurer): <https://youtu.be/23nwwu79sSA> (July 2019);
- **“Geoethical Issues and Geoethical Dilemmas”** (by Silvia Peppoloni, IAPG Secretary General): <https://youtu.be/gZ8Y56-yrDM> (August 2019);
- **“Geoethics and Geological Risks”** (by Silvia Peppoloni, IAPG Secretary General): <https://youtu.be/rZSjz0xiGUk> (December 2019).
- Video-Lesson by Stefano Tinti (IAPG President) on **“Geoethical issues in prediction and prevention of potentially catastrophic natural events”** at the workshop organized by the AAAS - American Association for the Advancement of Science, entitled: “Acutely Ethical: Principles and Guidelines on the Use of Location-Based Data in Crisis Situations”: <https://youtu.be/aHdZBp0cJbc> (March 2019).
- Video-Lesson by Silvia Peppoloni (IAPG Secretary General) entitled **“Geoethics in Disaster Risk Reduction”** in the online course (MOOC): “A Resilient Future: Science and Technology for Disaster Risk Reduction” (Discover how science and technology help us reduce disaster risk and increase resilience): <https://www.youtube.com/watch?v=jCVkuaKAqK8&t=43s>. This online course has been organized by the École Polytechnique Fédérale de Lausanne (Switzerland). The video is included in the Chapter 7: Science and Technology for Resilience and Sustainable Development - Ethics in Disaster Risk Reduction.
- Webinar by David Mogk (IAPG Board of Experts) entitled **“Professionalism and Geoethics: Creating a Workplace Environment Where Everyone Can Succeed”** for the GOLI - Geoscience Online Learning Initiative by AGI - American Geosciences Institute: <https://goli.americangeosciences.org/courses/course-v1:AIPG+AIPG009+2018/about> (June 2018).
- Video-Lecture on **“Geoethics and Georisks Reduction”** at the conference organized by the Italian Embassy in Norway, in collaboration with the University of Oslo, in the framework of the initiative “Under the Sign of Excellence”.
- Video-Lecture **“Geoethics and the IAPG network”** at the First National Conference of the African Association of Women in Geosciences Nigeria - AAWGN, June 2015): <https://www.youtube.com/watch?v=f-ki8cwP8bk>.

- Organization of a webinar on Geoethics at the EGU General Assembly 2013: [http://www.egu2013.eu/nh9\\_8\\_video.html](http://www.egu2013.eu/nh9_8_video.html). In collaboration with YES-Network and AGI – American Geological Institute.

## NEWSLETTER

IAPG has released its Newsletter since May 2015.

31 issues have been published and are available at: <https://www.geoethics.org/newsletter.html>.

No issues were published in 2023; information regarding activities and initiatives on geoethics by both the IAPG and the IUGS Commission on Geoethics were disseminated through the IAPG Blog.

## INTERNATIONAL EVENTS

**International Geoethics Day.** Officially launched in 2017, is held every year during the Earth Science Week: <https://www.geoethics.org/geoethics-day>. On 12 October 2023, the IAPG community celebrated the 7<sup>th</sup> anniversary, entitled “*Fostering the importance of geosciences for society*”. The 8<sup>th</sup> anniversary will be held on 17 October 2024.

The 1<sup>st</sup> anniversary was celebrated on 12 October 2017 (entitled: “*Take your photo*”), the 2<sup>nd</sup> anniversary on 18 October 2018 (entitled: “*Geoethics is....*”), the 3<sup>rd</sup> anniversary on 17 October 2019 (entitled “*Seed Today... for the future*”), the 4<sup>th</sup> anniversary on 15 October 2022 (entitled “*Make a... Geoethical Promise!*”), the 5<sup>th</sup> anniversary on 14 October 2021 (entitled “*Geoethics enhances the value of Geodiversity*”), the 6<sup>th</sup> anniversary on 13 October 2022 (entitled “*Promoting the UN Sustainable Development Goals*”).

## AWARDS

**Geoethics Medal** was conceived in April 2016 during the IAPG Council Meeting held during the EGU General Assembly in Vienna, and unanimously approved by the first IAPG General Assembly held during the 35<sup>th</sup> IGC – International Geological Congress in Cape Town, on 31 August 2016. The Geoethics Medal is bestowed annually. The first edition of the Geoethics Medal (2018) was launched on 18 October 2017, during the Global Ethics Day 2017 of the Carnegie Council for Ethics in International Affairs:

<http://www.geoethics.org/geoethics-medal>. The Geoethics Medal 2023 will be assigned in the first semester of 2024.

The Geoethics Medal 2022 went to Fahd Albarraq (Yemen Geological Museum) in March 2023. The Geoethics Medal 2021 went to Sandra Villacorta (Charles Darwin University) and Iain Hay (Flinders University, emeritus) in November 2021. The Geoethics Medal 2020 went to John Geissman (University of Texas at Dallas) in October 2020. The Geoethics Medal 2019 went to Linda C. Gundersen (U.S. Geological Survey, retired) in July 2019. The Geoethics Medal 2018 went to Chris King (IUGS-COGE and EGU Committee on Education) in September 2018.

## 8. Chief accomplishments 2023

### January 2023

- Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) had a meeting with Luiz Oosterbeek (President of the CIPSH - International Council for Philosophy and Human Sciences) to discuss about future joint initiatives for developing and promoting geoethics (17 January).
- IAPG-Peru organized its first general assembly to discuss the plan of activity 2023, to inform about activities of task groups and the students group and to report about MinerLima 2022 (19 January).
- The IAPG launched the call for abstracts for the Session 1.5 "Ethical, social and cultural aspects/implications in landslide risk management" (Conveners: Peter T. Bobrowsky, Irasema Alcántara-Ayala, Giuseppe Di Capua, Claudio Margottini, Silvia Peppoloni) in the Theme 1 of the 6th World Landslide Forum "Landslide Science for Sustainable Development", Florence (Italy), 14-17 November 2023 (20 January).
- RIES - Research Institute for Earth Sciences - Geological Survey of Iran, UCCGHA - UNESCO Chair on Coastal Geo-Hazard Analysis, and IAPG - International Association for Promoting Geoethics signed a Memorandum of Understanding (MoU) (26 January).

### February 2023

- Invited talk (in Italian) by Silvia Peppoloni (INGV, Italy and IAPG Secretary General),

entitled "Consapevolezza, emancipazione e responsabilità delle scienziate della Terra" (Awareness, empowerment and responsibility of women scientists in Earth Sciences) at the event "The Space of Science: paths and gender roles in research" organized at the University of Turin, Department of Earth Sciences, to celebrate the International Day of Women and Girls in Science. This event was supported by the IAPG (10 February).

- IAPG is represented by Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) at the 78th Executive Committee meeting of the IUGS - International Union of Geological Sciences (14-15 February).
- The IUGS - International Union of Geological Sciences officially established the Commission on Geoethics (CG). The proposal for creating the CG was presented at the 78th IUGS Executive Committee (EC) meeting in Belfast, Northern Ireland (United Kingdom) by Silvia Peppoloni (past IUGS Councilor and Secretary General of the IAPG - International Association for Promoting Geoethics). The CG will be the supporting branch of the IAPG to the IUGS and the IUGS body that officially deals with geoethics and social geosciences for the Union (16 February).
- Publication of a new book in the SpringerBriefs in Geoethics series: *Di Capua G. and Oosterbeek L. (2023). Bridges to Global Ethics: Geoethics at the Confluence of Humanities and Sciences. Springer, Cham, VII+115 pp., ISBN 978-3031222221. <https://doi.org/10.1007/978-3-031-22223-8>* (20 February).
- New article published in the IAPG Blog: "An exploration: from the history of science for geo-philosophical studies" by Martin Bohle (Germany) (<http://www.geoethics.org/articles-from-iapg-blog>) (22 February).

### March 2023

- Invited introductory talk by Silvia Peppoloni (IAPG Secretary General and Chair of the IUGS - Commission on Geoethics) to the 3rd Conference of Peruvian Women in Geosciences, organized by IAPG-Peru to celebrate the International Women's Day: <https://youtu.be/Udjn7eJy7kl> (8 March).
- New article published in the IAPG Blog: "On the Ground: Ending the Hell of Scotland's Conifer Plantations" by Patrick Phillips (Scotland, United Kingdom)

(<http://www.geoethics.org/articles-from-iapg-blog>) (14 March).

- The Journal of Geoethics and Social Geoscience (JGSG) published its second, open access, article: *Kernen, R., Amos, K., Abu, C., Allen, J., Ahmed, S., Birgenheier, L., Frank-Collins, J., George, T., Gomez, K., Haagsma, A., Hart-Wagoner, N., López Vega, A., Onwumelu, C., Rysak, B. (2023). Creating and promoting gender equity and diversity in professional geological societies: A focus on AAPG. Journal of Geoethics and Social Geosciences, 1(1), 1–31. <https://doi.org/10.13127/jgsg-27> (20 March).*
- Fahd Albarraq (Yemen Geological Museum in Sana'a) awarded with the Geoethics Medal 2022 (21 March).
- Silvia Peppoloni (Researcher at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy; IAPG Secretary General; Chair of the IUGS Commission on Geoethics) delivered a speech (in Italian), entitled “Geoethics and Anthropogenic Global Impacts: Resources, Risks, and Responsibility”, in the webinar of the seminar cycle “Sustainability, climate change and water resources” organized by the Department of Earth Sciences - University of Pisa, the Master's Degree Course in Environmental Sciences and the Interdepartmental Research Center for the Study of the Effects of Climate Change (CIRSEC), with the patronage of the Italian Association of Environmental Sciences and the Order of Geologists of Tuscany (23 March).
- The IAPG launched the call for abstracts for the Session 4.12) "Geoethics – fostering ethical perspectives in the Geosciences" (Conveners: Dominic Hildebrandt, Martin Bohle, Bárbara Zambelli) at GeoBerlin 2023 (23 March).
- The IAPG supported the call for abstracts for the session P51 "Exploring geoscience communication" (Conveners: Ortensia Amoroso, Rosa Coluzzi, Valeria Giampaolo, Vito Imbrenda, Silvia Peppoloni) at the joint congress of the Italian Society of Mineralogy and Petrology (SIMP), the Italian Geological Society (SGI), the Italian Society of Geochemistry (SOGEI) and the Italian Association of Volcanology (AIV), entitled "The Geoscience paradigm: Resources, Risks and future perspectives", Potenza (Italy), 19–21 September 2023 (28 March).
- Submission of the project proposal for creating the CIPSH Chair on Geoethics to Prof. Ping-cheng Hsiung (CIPSH Secretary-General) (29 March).
- IAPG was represented by Paul Hubley (IAPG-Canada Coordinator) at the Annual

General Meeting of the Canadian Federation of Earth Sciences (CFES) (31 March-1 April).

### April 2023

- Session “Sustainable use of georesources (including mines, water and energy resources) and geoethics” at the 75th Geological Congress of Turkey (Ankara, 11-15 April 2023), organized by the Union of Chambers of Turkish Architects and Engineers Chamber of Geological Engineers (TMMOB-JMO). Conveners: Yüksel Örgün Tutay (IAPG-Turkey Co-coordinator), Dündar Çağlan (IAPG-Turkey Co-coordinator), M.Cemal Göncüoğlu (10-14 April).
- First coordination meeting (virtual mode) for MinerLima 2023, the 9th edition of the International Minerals and Rocks Exhibition in Lima (Peru), organized by IAPG-Peru (12 April).
- Giuseppe Di Capua (Treasurer of the IAPG and IUGS Commission on Geoethics) took a seminar entitled "The need of geoethics for society" at the event "Café com Ciência" (Coffee with Science, Seminar Series). The seminar was organized by the Centro de Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR) of the Universidade do Porto (UP) in collaboration with the Centro de Monitorização e Interpretação Ambiental (CMIA) of Matosinhos and CMIA of Vila do Conde (19 April).
- EGU General Assembly 2023: Town Hall Meeting TM14 "Climate change communication: What policy, education, research, geoethics and action are realistic?" (Conveners: David Crookall and Bärbel Winkler). Session co-sponsored by IAPG and Future Earth: <https://www.geoethics.org/post/egu-general-assembly-2023-started-geoethics-is-there> (25 April).
- EGU General Assembly 2023: Session EOS2.3 "Climate and ocean education: Geoethics, emergency, fossil fuels, war and more" (Conveners: David Crookall, Giuseppe Di Capua, Svitlana Krakovska, Bärbel Winkler, Dean Page): 9 virtual and onsite oral presentations, 5 onsite and 6 virtual posters. This session was co-sponsored by IAPG and Future Earth: <https://www.geoethics.org/post/egu-general-assembly-2023-started-geoethics-is-there> (26 April).
- EGU General Assembly 2023: IAPG Session EOS4.1 "Geoethics: Geoscience Implications

for Professional Communities, Society, and Environment" (Conveners: Silvia Peppoloni, Antti-Ilari Partanen, Louise Mimeau, Giuseppe Di Capua): 30 virtual and onsite oral presentations, 18 onsite and 4 virtual posters: <https://www.geoethics.org/post/egu-general-assembly-2023-started-geoethics-is-there> (27 April).

### May 2023

- The Commission on Geoethics of the International Union of Geological Sciences took its 1st meeting in virtual mode (2 May).
- The IAPG and the International Union of Soil Sciences (IUSS) signed a Memorandum of Understanding (MoU) (16 May).
- Geoethics Medal 2023 (<https://www.geoethics.org/geoethics-medal>): Launch of the call for nominations (24 May).
- The Journal of Geoethics and Social Geoscience (JGSG) published its third, open access, article: *Gerbaudo, A., & Tonon, M.D. (2023). Words as stones for a geoethical glossary. Journal of Geoethics and Social Geosciences, 1(1), 1-23. <https://doi.org/10.13127/jgsg-26>* (25 May).
- Publication of the chapter: *Peppoloni S. and Di Capua G. (2023). The Significance of Geotourism Through the Lens of Geoethics. In Allan M. and Dowling R. (Eds.), Geotourism in the Middle East, Springer, Cham, pp. 41-52. [https://doi.org/10.1007/978-3-031-24170-3\\_3](https://doi.org/10.1007/978-3-031-24170-3_3)* (25 May).
- Silvia Peppoloni (IAPG Secretary General and Chair of the IUGS Commission on Geoethics) delivered an invited talk (in Italian) entitled "Geoethics: rewriting the relationship that binds us to the Earth" at the Conference "Geoethics: Reflections on the Etna area and the human being-environment relationship." The conference was included in the programme of the Etna Biodiversity Festival that was held in Fornazzo, Milo, Sicily (Italy). The IAPG was among the sponsoring organizations of the conference (26 May).
- The Journal of Geoethics and Social Geoscience (JGSG) published its fourth, open access, article: *Cameron, E. (2023). Manfred Max Neef's Human Scale Development and Geoethics. Journal of Geoethics and Social Geosciences, 1(1), 1-25. <https://doi.org/10.13127/jgsg-28>* (29 May).



### June 2023

- Presentation of the "White Paper: Gestión de Riesgo de Desastres en el Perú" by César Abad Pérez. This event was organized by IAPG-Peru. Editorial Committee of the White Paper: César Abad Pérez, Sandra Villacorta, Juvenal Medina, Gabriela Quiroz, Pedro Isique, Christian Ayala (1 June).
- Manuel Abrunhosa (IAPG Board of Experts) delivered a talk (in Portuguese) entitled "Groundwater in the Sustainability of 21st Century Cities" (Águas Subterrâneas na Sustentabilidade das Cidades do século XXI). IAPG co-sponsors this event (14 June).
- Launch of the 9<sup>th</sup> edition of MinerLima, the International Minerals and Rocks Exhibition in Lima (Peru), organized by IAPG-Peru (16 June).
- Australian Earth Sciences Convention (AESC) 2023 in Perth (Australia): IAPG Session 5.1a "Geoethics to responsibly manage local and global challenges of our times" (Conveners: Silvia Peppoloni and Sandra Villacorta Chambi): 3 oral presentations and 1 poster (<https://aesc2023.com.au/cms/wp-content/uploads/AESC-2023-Program-Grid-V16.pdf>). This session was co-sponsored by the IUGS (27 June).
- IAPG-Peru organized the 2nd Peruvian Geoscience Olympiad: <https://iapgperuviansection.wixsite.com/geolympiadperu/copia-de-1ra-opg>. (June 2023).

### July 2023

- New article published in the IAPG Blog: "The Indigenous Groundwater Declaration of the Australian Chapter of the IAH" by Enrico Cameron (Italy) (<http://www.geoethics.org/articles-from-iapg-blog>) (12 July).
- Parviz Armani (IAPG-Iran Coordinator) delivered a talk (in Persian) entitled "The International Association for Promoting Geoethics" in a seminar and webinar at the Research Institute for Earth Sciences - Geological Survey of Iran, Tehran (Iran) (30 July).

### August 2023

- The Task Group on Ethical Guidelines of the IUGS Commission on Geoethics held its

first meeting in virtual mode (2 August).

- New article published in the IAPG Blog: "Ethical Considerations for Responsible Geological Fieldwork and Sampling" by Enrico Cameron (Italy) (<http://www.geoethics.org/articles-from-iapg-blog>) (12 July).
- Judith Sullon (IAPG-Peru) delivered an online talk (in Spanish) entitled "Hacia una formación en valores geoéticos" (Towards a training in geoethical values) (12 August).
- WOMEEESA - Women in Earth and Environmental Sciences in Australasia and the IAPG signed a Memorandum of Understanding (MoU) (15 August).

### September 2023

- GeoBerlin 2023: Session 4.12 "Geoethics - fostering ethical perspectives in the Geosciences" (Conveners: Dominic Hildebrandt, Martin Bohle, Bárbara Zambelli): 3 onsite oral presentations. This session was sponsored by IAPG: [https://www.conftool.pro/geoberlin2023/index.php?page=browseSessions&form\\_session=140](https://www.conftool.pro/geoberlin2023/index.php?page=browseSessions&form_session=140) (7 September).
- Invited-Speech by Giuseppe Di Capua, entitled "Etiology of the Ecological Crisis: Building New Perspectives for Human Progress Through Geoethics" in the Session 2 "How can a global geoethics and a new technoethics grounded in various ethical traditions help us resist threats to a sustainable future?" at the Third CIPSH Conference on Global Ethics, Stockholm (Sweden) (12 September).
- Invited-Speech by Giuseppe Di Capua, entitled "Etiology of the Ecological Crisis: Building New Perspectives for Human Progress Through Geoethics" in the Session "Ecology and (global) ethics" at the Symposium "The quest for global ethics: researchers in dialogue" of the Stockholm University, Stockholm (Sweden) (14 September 2023).
- The Task Group on Ethical Guidelines of the IUGS Commission on Geoethics held its second meeting in virtual mode (15 September).
- The Task Group on Diversity, Equity and Inclusion (DEI) of the IUGS Commission on Geoethics held its first meeting in virtual mode (18 September).
- Joint congress of the Italian Society of Mineralogy and Petrology (SIMP), the Italian Geological Society (SGI), the Italian Society of Geochemistry (SOGEI) and the Italian

Association of Volcanology (AIV): Session S26 "Exploring geoscience communication" (Conveners: Ortensia Amoroso, Rosa Coluzzi, Valeria Giampaolo, Vito Imbrenda, Silvia Peppoloni): 9 onsite oral presentations + 8 posters. This session was sponsored by IAPG: [http://becong.dst.unipi.it/BECong/sessione\\_programma.php?sessione2=51](http://becong.dst.unipi.it/BECong/sessione_programma.php?sessione2=51) (21 September).

- Lectures by Silvia Peppoloni and Giuseppe Di Capua in the course organized by the Geological Society on London entitled "Online Training: Exploring Geoethics: Ethics of Responsibility Towards the Earth System" (26 September-10 October).

### October 2023

- The Task Group on Diversity, Equity and Inclusion (DEI) of the IUGS Commission on Geoethics held its third meeting in virtual mode (2 October).
- Invited-Speech by Surya Parkash entitled "Geoethics in the Indian Context" at the event organized by the Indian National Science Academy to celebrate the International Geodiversity Day 2023 in India, New Delhi (India) (6 October).
- 7th edition of the International Geoethics Day. Theme: "Fostering the importance of geosciences for society" (12 October).
- IAPG Bangladesh celebrates the 7th edition of the International Geoethics Day with a meeting at the Saheed Mokhlesur Rahman Auditorium of the Geological Survey of Bangladesh (GSB) in Dhaka (Bangladesh) (12 October).
- Keynote speech by Giuseppe Di Capua entitled "Building New Perspectives for Human Progress Through Geoethics" in the workshop organized by the Geological Survey of India to celebrate the 7th edition of the International Geoethics Day and the 2nd edition of the International Geodiversity Day, India (13 October).
- IAPG endorsed a Pardee Keynote Symposium at the Connects 2023 of the Geological Society of America: "P3. Addressing Society's Urgent Need for Critical Minerals; From Policy to Practice", Pittsburgh, Pennsylvania (USA) (17 October).
- Introductory speech by Silvia Peppoloni entitled "Ethical and societal relevance of geodiversity, geoheritage, and geoconservation: the geoethical perspective" in the conference organized by IAPG India, in cooperation with the National Institute of Disaster Management, India, to celebrate the 7th edition of the International Geoethics

Day, India (14 October).

- IAPG co-sponsored the XXV Congreso Geológico Boliviano (Bolivian Geological Congress), Tarija (Bolivia) (16-20 October).
- The Task Group on Diversity, Equity and Inclusion (DEI) of the IUGS Commission on Geoethics held its third meeting in virtual mode (23 October).
- 1st International Congress on Geodiversity, Geoheritage, Geotourism, Geoeducation, Geoparks & Sustainable Development Goals (5G & SDGs), Safi (Morocco): Silvia Peppoloni (IAPG Secretary General and Chair of the IUGS Commission on Geoethics) gave a keynote speech entitled "Geoheritage, geodiversity and geotourism through the lens of geoethics"; Giuseppe Di Capua (IAPG and IUGS Commission on Geoethics Treasurer) gave a talk entitled "The development of geoethics in the last ten years"; Ezzoura Errami (IAPG Continental Coordinator for Africa) was the conference chair (24-26 October).

### November 2023

- Invited-Speech by Roberto Lencina (Councillor of the IUGS Commission on Geoethics) entitled "The geoethical dilemmas associated with mineral resources and the energy transition" in a webinar organized by the Universidad Nacional de Río Negro (UNRN), Patagonia (Argentina) (7 November).
- The IAPG launched the call for abstracts for the Session 132332 "Soil science and geoethics: Contributing to create a more sustainable society" (Conveners: Silvia Peppoloni, Anna Krzywoszynska, Giuseppe Di Capua) in the "Theme: Soil and humanity" of the Centennial Celebration and Congress of the International Union of Soil Sciences (IUSS) "100 years of soil science past achievements and future challenges", Florence (Italy), 19-21 May 2024 (11 November).
- 6th World Landslide Forum: "Session 1.4 Landslides and society: cultural, educational, ethical, and social aspects in sustainable landslide risk reduction" (Conveners: Matjaž Mikoš, Irasema Alcántara-Ayala, Beena Ajmera, Peter T. Bobrowsky, , Giuseppe Di Capua, Claudio Margottini, Silvia Peppoloni): 15 oral onsite presentations, Florence (Italy) (16 November).
- The IAPG launched the call for abstracts for the "Session EOS4.4: Geoethics: The

significance of geosciences for society and the environment” (Conveners: Silvia Peppoloni and Giuseppe Di Capua) and the “Session EOS4.8: Climate and ocean change communication, education and geoethics: Crisis, crime, survival, war, “... at the European Geosciences Union (EGU) General Assembly, Vienna (Austria), 14–19 April 2024 (16 November).

- The IAPG launched the call for abstracts for the “Session 1: Geoethics at the heart of all geoscience: Serving the public good” (Convener: Silvia Peppoloni) in the “Theme: T39 Geoethics and Societal Relevance of Geosciences” of the 37<sup>th</sup> International Geological Congress, Busan (Republic of Korea), 25–31 August 2024 (17 November).
- Geological Society of Australia’s Earth Science Student Symposium (GESSS-SA): Sandra Villacorta gave a presentation entitled “Geoethics: A foundation for responsible geoscience practice”, Adelaide (Australia) (23 November).
- 9th edition of the International Minerals and Rocks Exhibition – MinerLima 2023, organized by IAPG–Peru, Lima (Peru) (24 November–3 December).
- XVI Chilean Geological Congress: Workshop “What is Geoethics” organized by IAPG–Chile and the Geological Society of Chile. Speakers: Silvia Peppoloni and Giuseppe Di Capua, Santiago (Chile) (26 November).
- XVI Chilean Geological Congress: Inaugural Plenary Lecture by Silvia Peppoloni entitled “Geoethics, geosciences and global anthropogenic impacts”, Santiago (Chile) (26 November).
- XVI Chilean Geological Congress: “Sesión AT6–6: Geoética: Experiencias y casos de estudio en Chile” (Conveners: Luisa Pinto, Tania Villaseñor, Hernán Bobadilla (27 November).
- Meeting organized by IAPG–Chile to discuss the draft of the Code of Geoethics of the Geological Society of Chile, during the XVI Chilean Geological Congress, Santiago (Chile) (28 November).

### December 2023

- The IAPG launched the call for abstracts for the I Latin American Symposium on Geoethics “Construyendo Relaciones Saludables con el Planeta” (“Building Healthy Relationships with the Planet”), co-organized by IAPG, IAPG–Argentina, IAPG–Bolivia,

IAPG-Brazil, IAPG-Cuba, IAPG-Chile, IAPG-Mexico, IAPG-Peru, IAPG-Uruguay, Lima (Peru), 21-22 June 2024 (20 December).

## 9. Plans for 2024

- Editorial projects

- Book: Peppoloni S. and Di Capua G., eds. (2024). *Geoethics for the Future: Facing Global Challenges*. Elsevier (in production).
- New book proposals for the SpringerBriefs in Geoethics series are expected to be submitted.

- International/National conferences/meetings, lectures, seminars

- IAPG representatives will attend the 79<sup>th</sup> Executive Committee meeting of the IUGS - International Union of Geological Sciences in Nairobi, Kenya (19-20 February 2024).
- IAPG supports the Session EOS4.4 “Geoethics: The significance of geosciences for society and the environment” (Conveners: Silvia Peppoloni, Giuseppe Di Capua, David Crookall) at the EGU General Assembly 2024 in Vienna, Austria (14-19 April 2024): <https://www.geoethics.org/egu2024>.
- IAPG co-sponsors with the IUSS the Session 132332 "Soil science and geoethics: Contributing to create a more sustainable society" (Conveners: Silvia Peppoloni, Anna Krzywoszynska, Giuseppe Di Capua) in the theme “Soil and humanity” at the Centennial Celebration and Congress of the International Union of Soil Sciences (IUSS) in Florence, Italy (19-21 May 2024): <https://centennialiuiss2024.org/submitted-sessions/#1686839565843-1852ab38-046d>.
- IAPG, IAPG-Argentina, IAPG-Bolivia, IAPG-Brazil, IAPG-Cuba, IAPG-Chile, IAPG-Mexico, IAPG-Peru, IAPG-Uruguay co-organize the I Latin American Symposium on Geoethics “Construyendo Relaciones Saludables con el Planeta” (“Building Healthy Relationships with the Planet”) in Lima, Peru (21-22 June 2024): [https://www.geoethics.org/\\_files/ugd/5195a5\\_d631153ba5f14e8199c5b43f4e1ef3f7.pdf](https://www.geoethics.org/_files/ugd/5195a5_d631153ba5f14e8199c5b43f4e1ef3f7.pdf) (first circular).
- IAPG co-sponsors with the IUGS the Session 1 "Geoethics at the hearth of all

geoscience: serving the public good" (Convener: Silvia Peppoloni) in the theme T39 "Geoethics and Societal Relevance of Geosciences" at the 37<sup>th</sup> International Geological Congress (IGC) in Busan, Republic of Korea (25-31 August 2024): <https://www.igc2024korea.org/content/14403>.

- IAPG will organize the 2<sup>nd</sup> General Assembly at the 37<sup>th</sup> International Geological Congress (IGC) in Busan, Republic of Korea (25-31 August 2024).
- School on Geoethics and Natural Issues
  - Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) will organize a course on geoethics at the 37<sup>th</sup> International Geological Congress (IGC) in Busan, Republic of Korea (25-31 August 2024).
  - IAPG will organize a course on geoethics in Costa Rica (November-December 2024).
- Projects
  - Silvia Peppoloni (IAPG Secretary General) will continue to coordinate the project ERG – Educational Resources on Geoethics, funded by Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy (January 2023-February 2024).
  - Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) will continue to contribute to the SSH CENTRE project "An indicator for local knowledge and epistemic justice in climate policy." (January-June 2024).
- Other activities (main initiatives by IAPG and its national sections)
  - IAPG will contribute to the activities of the IUGS Commission on Geoethics (January-December 2024).
  - Start of the activities of the newly established Chair on Geoethics of the International Union for Philosophy and Human Sciences at the Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy. IAPG is partner of this Chair and will contribute to its activities (January-December 2024).
  - IAPG will assign the Geoethics Medal 2023 and will launch the call for nominations for the Geoethics Medal 2024: <https://www.geoethics.org/geoethics-medal>. (March-April 2024).
  - Silvia Peppoloni (IAPG Secretary General) will organize the course on geoethics for

the Environmental Geology curriculum of the Bachelor's degree in Geological Sciences of the University of Pisa (Uzbekistan branch) (May-July 2024).

- IAPG will celebrate the 8<sup>th</sup> anniversary of the International Geoethics Day. Hashtag of this event: #geoethicsday2024: <https://www.geoethics.org/geoethics-day> (17 October 2024).
- IAPG-Chile will release the Code of Geoethics for the Geological Society of Chile.
- IAPG will sign a Memorandum of Understanding (MoU) with the Department of Geology of the University of Tehran in order to develop activities for promoting geoethics within the local geoscience community. The MoU is an initiative of IAPG-Iran.
- IAPG-Peru will organize the 10<sup>th</sup> edition of MinerLima “Feria Internacional de Minerales y Fósiles en el Perú” (International Exhibition of Minerals and Fossils in Peru).
- IAPG-Peru will organize the 3<sup>rd</sup> Peruvian Geoscience Olympiad: <https://iappperuviansection.wixsite.com/geolympiadperu>.
- IAPG Task Group on Geoethics and Geoheritage will continue to work on drafting a White Paper on Geoethics and Geo-Conservation.
- IAPG will continue to enlarge its network by opening new national sections.
- IAPG will continue to spread news, and information about contents, activities and initiatives on geoethics through its website, blog, social media and newsletter.

## 10. How IUGS Allocation for 2023 was used

IAPG didn't receive funds from IUGS in 2023.

## 11. Budget request with justification for 2024

As agreed with the IUGS Executive Committee, IAPG will not request a specific annual funding for the life time of the IUGS Commission on Geoethics. During the life time of the IUGS Commission on Geoethics, IAPG will provide support in managing annual funds of the Commission through its bank account.



## 12. Does your website have a link to IUGS?

Yes, directly in the homepage: <https://www.geoethics.org>.

## 13. Is the IUGS logo posted on your website?

Yes, directly in the homepage: <https://www.geoethics.org>.

## Name, address and e-mail of person preparing this report

**Giuseppe Di Capua**, Istituto Nazionale di Geofisica Vulcanologia - INGV (National Institute of Geophysics and Volcanology), International Association for Promoting Geoethics - IAPG, IUGS Commission on Geoethics, via di Vigna Murata 605 - 00143 Rome (Italy), [giuseppe.dicapua@ingv.it](mailto:giuseppe.dicapua@ingv.it).

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GEOETHICS

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