





Annual Report for the IUGS

Chief Accomplishments 2022 and Plans 2023

January 2023





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INTERNATIONAL UNION OF GEOLOGICAL SCIENCES (IUGS) Reporting Form for IUGS Affiliated Organizations 2022

1. Name of Affiliated Organization

IAPG – INTERNATIONAL ASSOCIATION FOR PROMOTING GEOETHICS

<u>https://www.geoethics.org/</u> Contact: Secretariat (iapgeoethics@aol.it; giuseppe.dicapua@ingv.it)



The IAPG was legally recognized as a not-for-profit organization through a public notarial deed on 21st 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)**, 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)**, a member organisation of the **International Council for Philosophy and Human Sciences (CIPSH)**, an Associate Organization of the **Geoscience Information in Africa - Network (GIRAF)**, an Observer Organization of the **Canadian Federation of Earth Sciences (CFES)**.

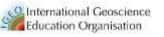


The IAPG has agreements of cooperation with: European Federation of Geologists (EFG), EuroGeoSurveys (EGS), American Geophysical Union (AGU), International Association of Hydrogeologists (IAH), International Association of Geomorphologists (IAG/AIG), Initiative on Forensic Geology (IUGS-IFG), African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



IAPG AGU **Ethics** & Finally, the is of the Equity Center partner (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 iCRAG IUGS (https://www.icrag-centre.org/news-and-media/conferences-andby 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 stake-holders 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 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 co-sponsoring the session "Geoethics to responsibly manage local and global challenges of our times" with the IUGS at the Australian Earth Sciences Convention (AESC) 2023 that will be held in Perth (27-30 June 2023) (<u>https://aesc2023.com.au/abstract-submission/</u>).





- The IAPG is cooperating with the IUGS-Initiative on Forensic Geology (IFG), within a joint Task Group, to draft a 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: <u>https://www.iugs.org/iugs60</u>.
- The IAPG was partner of the Earth Future Festival (EFF), co-organized by the IUGS, that was held in 2022 (<u>https://www.earthfuturesfestival.com/</u>).
- 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 (<u>https://www.icrag-centre.org/news-and-media/conferences-and-</u> 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, Prof. Roberto Greco, Dr. Nic Bilham, Prof. Ezzoura Errami, Dr. Meng Wang, Dr. Margaret Brocx).





The **General Assembly** (<u>https://www.geoethics.org/ga</u>) consists of all the IAPG members. The 1st General Assembly was held in Cape Town (South Africa) at the 35th IGC (31 August 2016). The 2nd General Assembly was to be held in Delhi (India) at the 36th IGC (March 2020). Unfortunately it has been postponed to the 37th 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 <u>https://www.geoethics.org/membership</u>, or send their data via email to the IAPG Secretariat. Currently the **IAPG network** comprises **2965 members** from **127 countries** on **5 continents**.

IAPG The 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 (Abdul Baquee Khan Majlis and 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 Ikwumelezeh), 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 (Yuriy Kostyuchenko), 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**) (<u>https://www.geoethics.org/experts</u>) on specific issues related to geoethics. The BE has the important practical function of suggesting 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: Geoethics 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



IAPG-ECST logo

(topic: Geoethics and young geoscientists).

In 2020, the IAPG established the **Early Career Scientists Team** (ECST) (<u>https://www.geoethics.org/ecst</u>), 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 ESCT 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 (<u>https://www.geoethics.org/delegates</u>). 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); 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** (<u>https://www.geoethics.org/tggfg</u>), 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). Carolyn Ramsey (Canada) resigned from the initial team. 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": <u>https://www.geoethics.org/geoethics-school</u>) 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 editorin-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: <u>https://www.journalofgeoethics.eu/</u>.

6. Interaction with other International organizations and projects

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

- 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);
- 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 Year of Global Understanding (IYGU).
- Italian Geological Society (SGI-Società Geologica Italiana);
- 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)
- Young Earth-Scientists (YES) Network;
- World Conferences on Research Integrity (WCRI).

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

- **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: <u>https://goal-erasmus.eu/</u>). 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: <u>http://interminproject.org/</u>). This project ended in 2021.

The IAPG did not receive funds from the ERG and GOAL projects. The IAPG representative in the project INTERMIN received 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 <u>https://www.geoethics.org/geoethics-school</u>.

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 Kingdome), 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).

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, VIII+126 pp., ISBN 978-3031222221. <u>https://link.springer.com/book/9783031222245</u>.
- Book: Peppoloni S. and Di Capua G. (2022). Geoethics: Manifesto for an Ethics of Responsibility Towards the Earth. Springer, Cham, XII+123 pp., ISBN 978-3030980436. 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. <u>https://www.mdpi.com/journal/sustainability/special_issues/geoethics</u>.
- 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, p.
 VIII+311, ISBN 978-1786205384. doi:10.1144/SP508. https://sp.lyellcollection.org/content/508/1/NP.
- Bohle M. and Marone E., Eds. (2021). *Geo-societal Narratives Contextualising geosciences*.
 Palgrave Macmillan, Cham, p. XXV+221, ISBN 978-3030790271. doi:10.1007/978-3-030-79028-8. https://link.springer.com/book/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, p. 224, Donzelli Editore, ISBN 978-8855221696. <u>https://www.donzelli.it/libro/9788855221696</u>.
- 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, p. XXXI+715. ISBN 978-3030593193. doi:10.1007/978-3-030-59320-9.

https://www.springer.com/gp/book/9783030593193.

- 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, <u>https://link.springer.com/journal/42990/volumes-and-issues/3-3</u>.
- Book: Joel C. Gill and Martin Smith, Eds. (2021). Geosciences and the Sustainable Development Goals. Springer, p. XXXIII+474, ISBN 978-3030388140. doi:10.1007/978-3-030-38815-7. https://link.springer.com/book/10.1007%2F978-3-030-38815-7.
- Book: Vasconcelos C., Schneider-Voß S., and Peppoloni S., Eds. (2020). *Teaching Geoethics -Resources for higher education*. U.Porto Edições, 207 pp., ISBN 978-9897462542. 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. ISBN 978-3030379254, doi: 10.1007/978-3-030-37926-1.
- Book: Bohle M., Ed. (2019). *Exploring Geoethics: Ethical Implications, Societal Contexts, and Professional Obligations of the Geosciences*. Authors: M. Bohle, S. Peppoloni, G. Di Capua, N. Bilham, E. Marone, R. Preiser. Palgrave Pivot, Cham, XIV + 214 pp., ISBN 978-3-030-12009-2, <u>https://link.springer.com/book/10.1007/978-3-030-12010-8</u>.
- 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., p. 336, American Geophysical Union, Wiley, ISBN 978-1-119-06778-8, <u>http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1119067782.html</u>.
- Book: Peppoloni S. and Di Capua G., Eds. (2015). *Geoethics: the Role and Responsibility of Geoscientists*, Geological Society, London, Special Publications, 419, ISBN 978-1-86239-726-2, http://sp.lyellcollection.org/content/419/1.
- Book: Wyss M. and Peppoloni S., Eds. (2014). *Geoethics: Ethical Challenges and Case Studies in Earth Sciences*, 450 p. Elsevier <u>http://store.elsevier.com/Geoethics/isbn-9780127999357/</u>.
- 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, XVII, 274 p. 103 illus., 86 illus. in color, Springer

http://www.springer.com/earth+sciences+and+geography/environmental+science+%26+enginee ring/book/978-3-319-09302-4.

 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: <u>https://www.geoethics.org/ctsg</u>.

Supported by 30 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, 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 Perù-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, 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 35 languages: Afrikaans, Albanian, Arabic, Armenian, Belarusian, Bengali, 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: <u>https://www.geoethics.org/geopromise</u>.
 Supported by 30 geoscience organizations and available in 35 languages (see above).
- White Paper on Responsible Speleology: <u>https://www.geoethics.org/wp-responsible-speleology</u>.
- White Paper on Responsible Mining: <u>https://www.geoethics.org/wp-responsible-mining</u>. 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

- 42 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: <u>https://youtu.be/jf4RM8YGa8Y;</u>
 - 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: <u>http://oe1.orf.at/programm/404157;</u>
 - 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: <u>http://www.raiscuola.rai.it/articoli/nautilus-seguendo-il-</u> tempo/26025/default.aspx;
- Italian Radio Television Network (RAI), Radio3 Scienza, subject: Natural risks;
- Science Festival in Genoa (Italy):

Part 1 <u>https://www.youtube.com/watch?v=Xt0_Z6mAGeI&list=UUP-Fngse1pu9sFvyBgN3AzQ</u> Part 2 <u>https://www.youtube.com/watch?v=M2aYspo0p5Y&feature=youtu.be</u>.

<u>Many scientific PAPERS/CHAPTERS</u> on geoethics have been included in the books mentioned above. About 280 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), IGC -International Geological Congress (2012, 2016, 2022), International Workshop on Natural Hazards (NatHaz) (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), 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 Paleontologia del Perù (2018), Jornadas Centíficas 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), 6th 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 8th edition was held in 2022.

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

WEBSITE AND SOCIAL NETWORKS

- Official Website: <u>https://www.geoethics.org</u>
- New Blog (from 29 June 2022): <u>https://www.geoethics.org/blog</u>
- Old Blog (till 29 June 2022): <u>http://iapgeoethics.blogspot.com</u>





- Linkedin Group "Geoethics and Culture of Geosciences" (3606 members): https://www.linkedin.com/groups/4615518
- Facebook Page: <u>https://www.facebook.com/iapg.geoethics/</u> (9352 followers)
- Twitter Page (@IAPGeoethics): <u>https://twitter.com/IAPGeoethics</u> (3223 followers)
- YouTube channel: <u>https://www.youtube.com/user/iapgeoethics/videos</u> (176 registered followers)
- Photo gallery on Flickr: https://www.flickr.com/photos/125283529@N05/sets/
- Other IAPG national sections webpages at: <u>https://www.geoethics.org/sections.html</u>

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.

WEBINAR AND VIDEO-LECTURES/SEMINARS

- 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 and SafeGreece, Keynote speaker: Gerasimos A. Papadopoulos (IAPG-Greece Co-coordinator), Coordinator: Maria Triantaphyllou (IAPG-Greece Co-coordinator): <u>https://www.youtube.com/watch?v=D4Y6bEAMWfc</u> (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", 6th 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: <u>https://www.youtube.com/watch?v=LsLE5a0TIWE</u>, 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, 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): <u>https://www.youtube.com/watch?v=fxvaTezYEZw</u> (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 "2nd Conversation of Peruvian Women in Geosciences", organized by IAPG-Peru: <u>https://www.youtube.com/watch?v=dCOyDyyHWZ0</u> (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: 4th 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=Z10QPPWAeuo (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=gPIyNf8RNzM (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: <u>https://www.youtube.com/watch?v=V3TiXhVQKiE</u> (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
 Geoethics
 (Silvia Peppoloni):

 https://www.youtube.com/watch?v=Rz5yHyHjzEw.
 Peppoloni
 - 2. **Responsible conduct of research and professionalism** (David Mogk): https://www.youtube.com/watch?v=RZmUEyR_Ri8.
 - 3. **Development Perspectives for Geoethical Thoughts?** (Martin Bohle): <u>https://www.youtube.com/watch?v=EcCnxHbIYt0</u>.
 - 4. Education for Confronting (geo)ethical dilemmas (Eduardo Marone): https://www.youtube.com/watch?v=r5NlHyrjZX4.
 - 5. Geoethics and responsible mining (Nic Bilham): <u>https://www.youtube.com/watch?v=Z-</u> <u>EuWOE-CGs</u>.
 - 6. Geoethics in natural hazards from the perspective of an engineering geologist (Vincent Cronin): <u>https://www.youtube.com/watch?v=xhyXb6WxyOw</u>.
 - 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 (Vítor 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: <u>https://www.youtube.com/watch?v=QwYsDGJRS7E</u> (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): <u>https://youtu.be/GANbLvJ6bms</u> (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: <u>https://youtu.be/XRNMFkK1wBE</u> (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: <u>https://youtu.be/81XL4eBFizY?list=PLWuYED1WVJIOyGKNfOeS9fXTPcxyVmEKm</u> (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: <u>https://youtu.be/QV-qgAJPAAQ</u> (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: <u>https://youtu.be/oun00bG-ABE</u> (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: <u>https://youtu.be/uyLpdTBJk98</u> (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: <u>https://www.youtube.com/watch?v=KYH9MNMQs3c</u> (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): <u>https://youtu.be/NX7Gii5adKk</u> (March 2019);
 - "Geoethics and responsible use of geo-resources" (by Giuseppe Di Capua, IAPG Treasurer): <u>https://youtu.be/23nwwu79sSA</u> (July 2019);
 - "Geoethical Issues and Geoethical Dilemmas" (by Silvia Peppoloni, IAPG Secretary General): <u>https://youtu.be/gZ8Y56-yrDM</u> (August 2019);
 - "Geoethics and Geological Risks" (by Silvia Peppoloni, IAPG Secretary General): <u>https://youtu.be/rZSjzOxiGUk</u> (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": <u>https://youtu.be/aHdZBp0cJbc</u> (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): <u>https://www.youtube.com/watch?v=jCVkuaKAqK8&t=43s</u>. 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: <u>http://www.egu2013.eu/nh9_8_video.html</u>. 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: <u>https://www.geoethics.org/newsletter.html</u>.

INTERNATIONAL EVENTS

International Geoethics Day. Officially launched in 2017, is held every year during the Earth Science Week: <u>https://www.geoethics.org/geoethics-day</u>. On 13 October 2022, the IAPG





community celebrated the 6th anniversary, entitled "Promoting the UN Sustainable Development Goals".

The 1st event was celebrated on 12 October 2017 (entitled: "*Take your photo*"), the 2nd event on 18 October 2018 (entitled: "*Geoethics is.....*"), the 3rd event on 17 October 2019 (entitled "*Seed Today... for the future*"), the 4th event on 15 October 2022 (entitled "*Make a... Geoethical Promise!*"), and the 5th event on 14 October 2021 (entitled "*Geoethics enhances the value of Geodiversity*").

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 35th 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: <u>http://www.geoethics.org/geoethics-medal</u>. The Geoethics Medal 2022 will be assigned at the beginning of 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 2022 and plans for 2023

CHIEF ACCOMPLISHMENTS 2022

January 2022

- Publication: Di Capua G., Bohle M., Hildebrandt D., Marone E., Peppoloni S. & Schneider S. (2022). Push for ethical practices in geoscience fieldwork. Nature Correspondence, 601, 26. https://doi.org/10.1038/d41586-021-03837-0 (4 January).
- IAPG-Turkey informed that within the scope of the Engineering Ethics course at the Geological Engineering Department of Istanbul Technical University (ITU), Geoethics is taught for 4 weeks (4 hours) in both the fall and spring semesters (5 January).





- Publication of the call for abstracts for the session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?" at the EGU22 in Vienna, Austria (7 January).
- New article published in the IAPG Blog: "COP26 and Geoethics" by David Ovadia (United Kingdom) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (8 January).
- Dominic Hildebrandt (IAPG-Germany co-coordinator) gave an invited speech, entitled "Shaping responsible future experts: the need for integrating Geoethics in Geoscience university education", at the Geosciences Colloquium, Institute for Geoscience, Friedrich Schiller University Jena, Germany (13 January).
- Publication in the IAPG YouTube channels of the video on geoethics of the talk by Vincent Cronin (IAPG Continental Coordinator for North America). This video was broadcasted at the "International Workshop on Geoethics with focus on Geohazards and Mining Disasters", organized by IAPG-India and held on 14 October 2021. Video: <u>https://youtu.be/gPIyNf8RNzM</u> (18 January).
- Publication in the IAPG YouTube channels of the video "Geoethics: from an ethics for geosciences to a global ethics for societies" by Giuseppe Di Capua (IAPG Treasurer). This video was broadcasted at the event organized by the GeoZS Geological Survey of Slovenia for its 75th anniversary on 17 November 2021. Video: <u>https://youtu.be/V3TiXhVQKiE</u> (18 January).
- New article published in the IAPG Blog: "Geomorphological heritage and beyond" by Enrico Cameron (Italy) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (21 January).
- IAPG-Italy contributed to the issue 6 of the magazine "Geologicamente" of the Italian Geological Society (SGI). On this magazine there are dedicated pages on geoethics managed by IAPG-Italy (that is also the Section of Geoethics and Geological Culture of the SGI): <u>https://www.socgeol.it/files/download/pubblicazioni/Geolo</u> gicamente/GEO6%20-%20completo%20ligth.pdf (24 January).



- New book in the SpringerBriefs on Geoethics: Villacorta Chambi S.P., ed. (2022). Geoethics in Peru: A Pathway for Latin America. SpringerBriefs in Geoethics, Springer International Publishing, pp. XXIII+107. ISBN 978-3030867300. <u>https://doi.org/10.1007/978-3-030-86731-7</u> (25 January).
- Simon Schneider (IAPG-Germany co-coordinator) gave an invited speech, entitled "Geoethics -





Those who demand relevance must take responsibility", at the Geologische Gemeinschaft zu Freiberg e.V., Germany (26 January).

- Publication of the call for abstracts for the session P7 "Geosciences and geoethics: achieving UN Agenda 2030" at the 91th Congress of the Italian Geological Society (SGI) in Turin, Italy (27 January).
- New article published in the IAPG Blog: "A Geo-philosophical Topic Agency at the Human-Earth Nexus" by Martin Bohle (Germany) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (30 January).
- The IAPG Executive Council endorsed the Jena Declaration on "cultural and regional dimension of global sustainability": <u>https://iapgeoethics.blogspot.com/2022/01/iapg-endorsed-jenadeclaration.html</u> (31 January).

February 2022

- IAPG Annual Report 2021 ("Chief Accomplishments 2021 and Plans 2022") for the IUGS published on the IAPG website: https://www.geoethics.org/annual-reports (7 February).
- New paper (in Italian): Peppoloni S. and Di Capua G. (2021). Geoetica: un'etica per la relazione tra gli esseri umani e la terra (Geoethics: an ethics for the relationship between humans and the Earth). The Future of Science and Ethics, 6, 42-53. https://doi.org/10.53267/20210104 (8 February).
- New paper: Handl S., Calheiros C.S.C., Fiebig M. and Langergraber G. (2022). Educational Resources for Geoethical Aspects of Water Management. Geosciences, 12(2), 80. <u>https://doi.org/10.3390/geosciences12020080</u> (8 February).
- Silvia Peppoloni (IAPG Secretary General) contributed to the television program "Progetto Scienza Storie della Scienza" on planet Earth of RAI Radio Televisione Italiana (national public broadcasting company of Italy) (8 February).
- Article (in Italian) published in the magazine ReWriters, republished in the blog of IAPG-Italy: "La tutela dell'ambiente entra nella Costituzione: approvata la modifica" (Environmental protection enters the Constitution: amendment approved) by Silvia Peppoloni (Italy) (<u>http://geoeticaitalia.blogspot.com/2022/02/la-tutela-dellambiente-entra-nella.html</u>) (10 February).
- IAPG decided to support the Oxford Geoheritage Virtual Conference (OxGVC): <u>https://www.oxgvc.co.uk/</u> (10 February).





- Silvia Peppoloni (IAPG Secretary General) gave an invited speech at the webinar "UN International Day of Women and Girls in Science" organized by the IUGS International Union of Geological Sciences (11 February).
- New IAPG officers appointed: Peter T. Bobrowsky (new Vice-President); Vincent Cronin (new Continental Coordinator for North America); David Mogk (new Co-coordinator of IAPG-USA) (14 February).
- Publication of the call for abstracts for the session 13 "Seismology, geoethics and society: risk communication at the service of risk reduction" at the 3ECEES, in Bucharest, Romania (15 February).
- Silvia Peppoloni (IAPG Secretary General) and Ezzoura Errami (IAPG Continental Coordinator for Africa) delivered invited talks at the webinar "Formation of Supportive Networks in the Face of Adversity" organized by the IEEE Institute of Electrical and Electronics Engineers (24 February).
- New paper: Bohle M. and Marone E. (2022). Phronesis at the Human-Earth Nexus: Managed Retreat. Frontiers in Political Science. <u>https://doi.org/10.3389/fpos.2022.819930</u> (24 February).
- Publication of the IAPG "Declaration against war and authoritarianism for the affirmation of human freedom and dignity": <u>https://www.geoethics.org/declaration-against-war</u>. The declaration was supported by 13 organizations and 264 people (26 February).
- Dominic Hildebrandt (IAPG-Germany co-coordinator) gave a talk (in German), entitled "Wer Relevanz einfordert, muss Verantwortung übernehmen" (Anyone who demands relevance must accept responsibility), at Geologische Gemeinschaft zu Freiberg e.V., TU Bergakademie Freiberg, Freiberg, Germany (28 February).
- Dominic Hildebrandt (IAPG-Germany co-coordinator) was invited to design and execute two integrated learning activities about Geoethics for Bachelor students in Geosciences at LMU Munich, Germany (28 February).

March 2022

- Hrvatsko Geološko Društvo (HGD) (Croatian Geological Society) became the 28th geoscience organization supporting the Cape Town Statement on Geoethics. Thanks to Dr. Zoran Peh (HGD) the Cape Town Statement on Geoethics and the Geoethical Promise was translated in Croatian (3 March).
- Webinar (in Spanish), entitled "2nd Conversation of Peruvian Women in Geosciences", organized





by IAPG-Peru: https://www.youtube.com/watch?v=dCOyDyyHWZ0 (8 March).

- The Journal of Geoethics and Social Geosciences (<u>https://www.journalofgeoethics.eu/</u>), supported by the IAPG, became operative (16 March).
- Publication of the call for abstracts for the session 10.2 "Geoethics fostering ethical perspectives in Geosciences" at the GeoMinKöln 2022 the Annual Conference of the Deutsche Mineralogische Gesellschaft (DMG The German Mineralogical Society) and the Deutsche Geologische Gesellschaft Geologische Vereinigung (DGGV The German Geological Society) in Cologne, Germany (16 March).
- Giuseppe Di Capua (IAPG Treasurer) represented the IAPG at the 77th Executive Committee Meeting of the IUGS in Paris (France), at the Société Géologique France (Geological Society of France). Even Peter T. Bobrowsky (IAPG Vice-President) and Silvia Peppoloni (IAPG Secretary General) attended the meeting. Peter T. Bobrowsky (IAPG Vice-President) received the James M. Harrison award of the IUGS International Union of Geological Sciences for his continuous work and support to the Union (16-17 March).
- Symposium S3 "Geological Hazards and Geoethics" (Peligros Geológicos y Geoética) at the XXI Argentinian Geological Congress (Congreso Geológico Argentino). Conveners: Elizabeth Rovere and Roberto Violante (IAPGeoethics-Argentina Co-coordinators). 15 presentations by 28 authors. Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) gave an invited talk on geoethics. This symposium was sponsored by IAPGeoethics-Argentina (17 March 2022).
- Webinar "Making Groundwater visible in Afghanistan" organized by IAPG-Afghanistan to celebrate the World Water Day 2022. Invited speech by Sebastian Handl (IAPG ECST), coordinators: Mohammad Salem Hussaini and Asadullah Farahmand (IAPG-Afghanistan Co-coordinators) (17 March).
- Silvia Peppoloni (IAPG Secretary General) gave an invited talk, entitled "Responsible management of water: a resource that recalls us to dialogue", at the IUGS60 virtual event for celebrating the World Water Day 2022 (22 March).
- Webinar "Geoethics: Bridging geoSTEM and the social sciences" by Martin Bohle (IAPG Board of Experts) at Edgeryders: <u>https://www.youtube.com/watch?v=fxvaTezYEZw</u> (22 March).
- New paper: Marjanović M., Milenković J., Lukić M., Tomić N., Antić A., Marković R.S., Atanasijević J., Božić D., Buhmiler S., Radaković M., Radivojević A.R., Langović Milićević A., Gavrilov M.B. and Marković S.B. (2022). Geomorphological and hydrological heritage of Mt.





Stara Planina in SE Serbia: From river protection initiative to potential geotouristic destination. Open Geosciences, 14(1), 275-293. <u>https://doi.org/10.1515/geo-2022-0340</u> (24 March).

• Invited-Speech by Manuel Abrunhosa (IAPG Board of Experts) delivered an invited talk, entitled "Geoethics and Groundwater" at the University of Pisa, Italy (24 March).

April 2022

- Geoethics Medal 2022 (<u>https://www.geoethics.org/geoethics-medal</u>): Launch of the call for nominations (1 April).
- New paper in the special issue "<u>New Advances on Geoethics and Sustainable Development</u>" of the journal Sustainability: *Processi M., Di Capua G., Peppoloni S., Corirossi M. and Valentinelli A. (2022). Science and Citizen Collaboration as Good Example of Geoethics for Recovering a Natural Site in the Urban Area of Rome (Italy). Sustainability, 14(8), 4429. <u>https://doi.org/10.3390/su14084429</u> (8 April).*
- Silvia Peppoloni (IAPG Secretary General) gave the lecture "Geoethics and geological culture: ethical, social and cultural references to support geologist's activity" at the University of RomaTre (Rome, Italy), within the initiative "Geology in the world of work", in cooperation with the Association of Professional Geologists of Lazio (8 April).
- Publication in the IAPG YouTube channels of the video "Geoethics: Bridging geoSTEM and the social sciences" by Martin Bohle (IAPG Board of Experts). This video was broadcasted at the Edgeryders event held on 22 March 2022. Video: <u>https://youtu.be/fxvaTezYEZw</u> (8 April).
- IAPG-Italy contributed to the issue 7 of the magazine "Geologicamente" of the Italian Geological Society (SGI). On this magazine there are dedicated pages on geoethics managed by IAPG-Italy (that is also the Section of Geoethics and Geological Culture of the SGI): https://www.socgeol.it/files/download/pubblicazioni/Geologicamente/GEO7b-web(1).pdf (13 April).
- New book: Peppoloni S. and Di Capua G. (2022). Geoethics: Manifesto for an Ethics of Responsibility Towards the Earth. Springer, Cham, XII+123 pp., ISBN 978-3030980436. https://doi.org/10.1007/978-3-030-98044-3 (14 April).
- New article published in the IAPG Blog: "Human War and War Against Nature: The Latest IPCC Report and the Prospect of a Lost Conflict" by Silvia Peppoloni (Italy) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (17 April).
- Video-Lecture by Silvia Peppoloni (IAPG Secretary General), entitled "Geoethics and Georisks:





Ethical and Social Aspects in Disaster Risk Reduction". This event was organized by the Department of Geography, School of Basic and Applied Sciences, Adamas University (Kolkata, India) for its Master Class series (21 April).

- IAPG celebrated the Earth Day 2022 (22 April).
- Silvia Peppoloni (IAPG Secretary General) was interviewed (in Italian) for the online magazine of the Italian Institute of Astrophysics. Title of the interview: "È l'ora della geoetica, per una scienza responsabile" (It is time for geoethics, for a responsible science): http://dx.doi.org/10.20371/INAF/2724-2641/1722878 (22 April).
- Online presentation (in Spanish) of the book "Geoethics in Peru: A Pathway for Latin America" (<u>https://link.springer.com/book/10.1007/978-3-030-86731-7</u>) by Sandra Villacorta, published in the SpringerBriefs in Geoethics series (22 April).
- Giuseppe Di Capua (IAPG Treasurer) contributed to the webinar "State of the Planet", organized by the IUGS within the initiatives to celebrate 60 years from its foundation (IUGS60) and the Earth Day 2022. Giuseppe Di Capua delivered a talk entitled "Ecological crisis and geosciences: the need for geoethics" and panelist at the round table. Video: was https://youtu.be/Qnh066e9VGM (22 April).
- The IAPG became official partner of the Earth Future Festival (EFF): <u>https://www.earthfuturesfestival.com/</u> (25 April).
- Presentation of the book (in Spanish) "Rovere E.I., Violante R.A., Alonso R.N., Amenábar C.R., Kubaczka P.M., Nawratil A.E., Lirio J.M. (2021). Geociencias y Sociedad (Geosciences and Society). Libro Editorial Autores de Argentina. Violante R.A., Cincioni E.E.L., Rovere E.I. eds., prefacio: Peppoloni S. y Di Capua G., Págs. 120. ISBN 978-98787132981" at the 2022 Buenos Aires International Book Fair, Argentina (28 April)

<u>May 2022</u>

- Publication in the IAPG YouTube channels of the video "Ecological crisis and geosciences: the need for geoethics" by Giuseppe Di Capua (IAPG Treasurer). This video was broadcasted at the "State of the Planet" event organized by the IUGS for IUGS60 and the Earth Day 2022 celebrations and held on 22 April 2022. Video: <u>https://youtu.be/Qnh066e9VGM</u> (5 May).
- New paper (in Italian): Peppoloni S. e Di Capua G. (2022). Crisi ecologica e geoetica. MicroMega, Almanacco di Filosofia, 3, 98-108, ISBN 979-1280852021 (9 May).
- The IAPG was supporting organization of the First Brazilian Meeting of Geoethics in Brazil (in





Portuguese), organized by the Geoethics Commission of the Brazilian Geological Society (SBGEO), that was held online. Clara Vasconcelos (IAPG-Portugal Coordinator) gave a lecture entitled "Geoethics in Education". Bárbara Zanbelli Azevedo (IAPG Early Career Scientists Team) was panelist in the debate "Geoethics, Mining and Water" (9-11 May).

- Pedro Isique (IAPG-Peru Coordinator) delivered a talk (in Spanish), entitled "Geoethics: A new path of thought and practice of geoscience" at the auditorium of the School of Geological Engineering of the UNMSM Universidad Nacional Mayor de San Marcos, Lima, Peru (12 May).
- Simon Schneider (IAPG-Germany co-coordinator) gave a talk, entitled "Basic Concepts for Responsible Action", at the Lunch Time Seminar, Department of Earth and Environmental Sciences, LMU Munich, Germany (17 May).
- Publication of the IAPGeoethics Newsletter, issue #1–2022: <u>http://www.geoethics.org/newsletter</u> (20 May).
- EGU General Assembly 2022: IAPG Short Course SC4.1 "Geoethics for Earth, Marine and Atmospheric Sciences". Conveners: Eduardo Marone, Silvia Peppoloni. 10 presentations: <u>https://meetingorganizer.copernicus.org/EGU22/session/43176</u> (23 May).
- EGU General Assembly 2022: IAPG Session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?". Conveners: Silvia Peppoloni, Giuseppe Di Capua, John Ludden, Luiz Oosterbeek, Pimnutcha Promduangsri, Billy Williams. 18 onsite and online presentations: https://meetingorganizer.copernicus.org/EGU22/session/43042. This session was co-sponsored by the IUGS, AGU, and CIPSH (24 May).
- EGU General Assembly 2022: Session EOS1.8 "Climate & ocean literacy: Helping people to care ethically within planetary boundaries". Conveners: David Crookall, Giuseppe Di Capua, Bärbel Winkler, Mario Mascagni. 14 onsite and online presentations: https://meetingorganizer.copernicus.org/EGU22/session/43043. This session was co-sponsored by the IAPG (24 May).
- EGU General Assembly 2022: Town Hall Meeting TM8 "Exploring the nexus of geoethics and climate change education": <u>https://meetingorganizer.copernicus.org/EGU22/session/44689</u>.
 Conveners: Giuseppe Di Capua, David Crookall, Bärbel Winkler, Eduardo Marone, Sabine Undorf, Sylvia Knight. This meeting was co-sponsored by the IAPG (24 May).
- Publication in the IAPG YouTube channels of the video "Geoethics to redefine the human-Earth





system nexus" by Giuseppe Di Capua (IAPG Treasurer). This video was broadcasted at the Session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?" at the EGU 2022. Video: <u>https://youtu.be/W0xQFIg3CHU</u> (25 May).

- Publication in the IAPG YouTube channels of the video "The significance of geotourism through the lens of geoethics" by Silvia Peppoloni (IAPG Secretary General). This video was broadcasted at the Session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?" at the EGU 2022. Video: https://youtu.be/4gxWlGwxmbA (25 May).
- Silvia Peppoloni (IAPG Secretary General) gave a keynote speech, entitled "Geoethics to face natural risks by improving societal resilience", at the International Workshop on Natural Hazards (NatHaz22) held in Angra do Heroísmo, Terceira island, Azores (26 May).
- Dominic Hildebrandt gave a talk (in German), entitled "Geoethik Kritisches Denken der Problemlöser*innen von morgen" (Geoethics – critical thinking of problem solvers of tomorrow), in the framework of the Gemeinsame Bundesfachschaftentagung der Geowissenschaften und der Geographie in Halle an der Saale, Germany (28 May).
- Vitor Correia (IAPG Delegate for the Relationships with European Organizations) co-drafted the Deliverable 10.9 "Draft Plan for Sustainability" of the European project "Robominers", focused on the importance of considering environmental, economic, social, policy and ethical aspects in defining a sustainability framework for the project robotic miner (31 May).

June 2022

- Roberto Lencina (IAPG TGRM) gave the talk (in Spanish) "Geoethics: Scope and Application in the Professional Practice of Geologists" at the Conference Cycle 2022 organized by the University of Córdoba and the Professional Organization of Geologists of the Province of Córdoba, Argentina (1 June).
- Publication in the IAPG YouTube channels of the video "From a Kingdom of Coal to a Reign of Heaven: Geoethics as a Political Geo-Theology" by Francesc Bellaubi (IAPG member). This video was broadcasted at the Session EOS4.1 "Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains?" at the EGU 2022. Video: <u>https://youtu.be/H3q6EzEAWMM</u> (8 June).





 IAPG-Chile/Geoethics Group of SGCh organized the first seminar (webinar) of the series "Towards the construction of Chilean Geoethics Code" (in Spanish), entitled "The scientific and professional work of those involved in geosciences". Video: <u>https://youtu.be/UDxa60TW3q8</u> (8 June).



- Official launch of MinerLima 2022, 8th edition of the Mineralogical Exhibition of Peru, organized by IAPG-Peru. Coordinator: César Chacaltana (IAPG-Peru, Universidad Nacional Mayor de San Marcos, INGEMMET) (10 June).
- New article (in German): Schneider S., Hildebrandt D. (2022). Geoethik: Gemeinsam gesellschaftliche Verantwortung übernehmen. GMIT 88, 20. <u>https://doi.org/10.23689/fidgeo-5423</u> (15 June).
- Silvia Peppoloni (IAPG Secretary General) delivered an online keynote speech, 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 (Portugal) at the Centro Cultural "Elvino Pereira", Mação. Video (from 1:54:08 to 2:28:00): https://www.facebook.com/watch/live/?ref=watch_permalink&v=3443079382586119 (20 June).
- New paper: Jouini M., Royer-Lavallée A., Pabst T., Chung E., Kim R., Cheong Y.-W. and Neculita C.M. (2022). Sustainable Production of Rare Earth Elements from Mine Waste and Geoethics. Minerals, 12(7), 809. <u>https://doi.org/10.3390/min12070809</u> (25 June).
- Publication of the video "The significance of geotourism through the lens of geoethics" by Silvia Peppoloni (IAPG Secretary General), related to her talk at the EGU 2022 Session EOS4.1: Geoethics in the face of global anthropogenic changes: how do we intersect different knowledge domains? on 24 May 2022: <u>https://youtu.be/4gxWlGwxmbA</u> (29 June).

July 2022

- New article published in the IAPG Blog: "Revisiting requirements and criteria to select UNESCO Global Geoparks" by Mamoon Allan (Jordan) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (7 July).
- Silvia Peppoloni (IAPG Secretary General) delivered an invited talk, entitled "Geoethics and Oceans: Challenges and Opportunities", at the 6th 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, Portugal: <u>https://www.youtube.com/watch?v=LsLE5a0TIWE</u>,





from 4:23:47 to 4:50:50 (15 July).

IAPG-Chile/Geoethics Group of SGCh organized the second seminar (webinar) of the series "Towards the construction of Chilean Geoethics Code" (in Spanish), entitled "Geosciences and their relationship with nature and culture". Video: https://www.youtube.com/watch?v=ceQMF4jgPbw (28 July).

August 2022

- The IAPG co-sponsors the "Culture and Ethics of Geologic Sampling Survey" by David Mogk (IAPG-USA Co-coordinator and IAPG Board of Experts) and Marjorie A. Chan (IUGS-USNC Chair), with AGU, AGI, MSA, NAGT, PS and USNC-GS. The survey was commissioned by the Geological Society of America: <u>https://www.surveymonkey.com/r/geologic-sampling</u> (18 August).
- Roberto Greco (IAPG Continental Coordinator for South America) organized a set of seminars on environmental ethics and geoethics (15 lectures of 2 hours each) in a PhD course in science and mathematics at the Institute of Geosciences of the University of Campinas, Brazil (16 August – 6 December).
- Roberto Greco (IAPG Continental Coordinator for South America) organized a set of seminars on geoethics (15 lectures of 2 hours each) in a course on geology at the Institute of Geosciences of the University of Campinas, Brazil (18 August – 1 December).
- Publication of the following thesis on the IAPG website https://www.geoethics.org/theses: Canseco R.S. (2022). Proposta d'aplicació de la geoètica a l'ensenyament universitari a partir d'un dilema geoètic com a estudi de cas. Tutors: Joan Poch Serra i Francesc Bellaubí. Grau de Geología Facultat de Ciències, Universitat Autònoma de Barcelona, pp. 22. (In Catalan) (22 August).
- IAPG-Chile/Geoethics Group of SGCh organized the third seminar (webinar) of the series "Towards the construction of Chilean Geoethics Code" (in Spanish), entitled "The relationship of geosciences with society". Video: <u>https://www.youtube.com/watch?v=w_mHXcvfljU</u> (24 August).
- Publication of the IAPG "White Paper on Responsible Speleology": <u>https://www.geoethics.org/wp-responsible-speleology</u>. This document was prepared by the IAPG Task Group on Responsible Speleology, reviewed by an International Panel of Experts and finally approved by the IAPG Executive Council (30 August).





- Roberto Lencina (IAPG TGRM) gave the talk (in Spanish) "Social Conflicts in Mining. The from ethical proposal for an approach an management perspective" (https://www.argentinaminingonline.com/am2022/agenda-item/charla-roberto-lencina) and was Argentina Mining 2022 congress in panelist at the Salta, Argentina. Video: https://www.youtube.com/watch?v=U6bP1n5kJ8A, from 08:08:25 to 08:43:35 (31 August).
- Online course (in Spanish) entitled "The exercise of geoethics and deontology in geosciences" organized by IAPG-Peru for MinerLima 2022. Luisa Pinto Lincoñir (IAPG-Chile Coordinator) gave an invited talk on geoethics and deontology (31 August).

September 2022

- IAPG-Italy contributed to the issue 8 of the magazine "Geologicamente" of the Italian Geological Society (SGI). On this magazine there are dedicated pages on geoethics managed by IAPG-Italy (that is also the Section of Geoethics and Geological Culture of the SGI): https://www.socgeol.it/files/download/pubblicazioni/Geologicamente/GEO8%20-%20intero%20WEB.pdf (1 September).
- Roberto Lencina (IAPG TGRM) gave a talk (in Spanish) at the Course-Workshop "Social Conflicts in Mining. Social license construction process" for students of mining technique at the Argentina Mining 2022 congress in Salta, Argentina (1 September).
- Roberto Lencina (IAPG TGRM) awarded with the prize "Johannes Boon 2022" for the contribution to "Social Responsibility and Community Relationships in Mining", at the Argentina Mining 2022 congress in Salta, Argentina (2 September).



- GeoMinKöln 2022: Topic 10.2 "Geoethics fostering ethical perspectives in Geosciences": https://www.conftool.pro/geominkoeln2022/index.php?page=browseSessions&form_session=16
 Conveners: Dominic Hildebrandt (IAPG-Germany co-coordinator), Simon Schneider (IAPG-Germany co-coordinator), Martin Bohle (IAPG Board of Experts). 4 orals and 1 poster, around 40 attendees. This was the first ever geoethics session in an academic event in Germany (13 September).
- New paper: Chan M.A. and Mogk D.W. (2022). Soliciting community input on culture and ethics





of geologic sampling. GSA Today, 32, 44–45. <u>https://doi.org/10.1130/GSATG542GW.1</u> (A follow up GSA Today manuscript is in review with recommendations for personal responsibility regarding geological sampling and institutional guidelines and services needed for the geoscience community. Survey results are being submitted to the GSA Council for consideration for development of a possible Position Statement, modification of existing codes of conduct and publication guidelines, and an array of human mediated and web-based services to support future geoethical sampling practices) (15 September).

- IAPG-Chile/Geoethics Group of SGCh organized the fourth seminar (webinar) of the series "Towards the construction of Chilean Geoethics Code" (in Spanish), entitled "Contribution to the training of new generations of scientists and professionals in geosciences". Video (part I): <u>https://www.youtube.com/watch?v=EBQKGwxGdwY;</u> Video (part II): <u>https://youtu.be/3YzJqmDpSjI</u> (21 September).
- New paper: Marjanović M., Radivojević A.R., Antić A., Peppoloni S., Di Capua G., Lazarević J., Marković R.S., Tomić N., Milićević A.L., Langović Z., Mišić I. and Marković S.B. (2022). Geotourism and geoethics as support for rural development in the Knjaževac municipality, Serbia. Open Geosciences, 14(1), 794-812. <u>https://doi.org/10.1515/geo-2022-0388</u> (22 September).
- Roberto Greco (IAPG Continental Coordinator for South America) coordinated the webinar "A biocultural ethics to overcome taxonomic chauvinism in science and education" by Ricardo Rozzi during the XI Internal Seminar of PECIM Multiunit Postgraduate Program in Teaching Science and Mathematics at the University of Campinas, Brazil (28 September).
- IAPG-Peru organized an event (in Spanish) entitled "The new Socio-environmental Challenges in Las Bambas Mining" at Museo de Minerales Andrés del Castillo in Lima (30 September).

October 2022

- New article published in the IAPG Blog: "Ontology as the quality or essence of existence" by Patrick Phillips (Scotland, United Kingdom) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (10 October).
- Noontime Lecture "Culture and Ethics of Geologic Sampling" by Marjorie A. Chan and David Mogk (IAPG-USA Co-coordinator) at the 2022 Geological Society of America Connects meeting: <u>https://community.geosociety.org/gsa2022/program/noontime</u>, in Denver, Colorado, USA. (10 October).





- A special Twin Event, entitled "Geoheritage Conservation and Geoethics", held at the Indian National Science Academy, New Delhi, India, celebrated the 1st International Geodiversity Day and the 6th International Geoethics Day. This event was sponsored and organised by INSA National Committee for IUGS & INQUA, The Society of Earth Scientists & Ministry of Earth Sciences, Government of India and supported by the IAPG (11-12 October).
- International Geoethics Day 2022 (13 October).
- Vincent Cronin (IAPG Continental Coordinator for North America) delivered an invited talk, 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 and Adamas University (West Bengal, India), to celebrate the International Geoethics Day 2022: <u>https://www.youtube.com/watch?v=CbJApd5BDuk</u>, from 17:09 to 37:40 (13 October 2022).
- Webinar entitled "International Geoethics Day Seminar", organized by the Geoscience Society of New Zealand. This event explores topics relating to ethics in the geosciences in honour of the International Geoethics Day 2022 (13 October).
- 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. Silvia Peppoloni (IAPG Secretary General) gave a talk entitled "Geoetica: ridefinire il nesso essere umano-sistema Terra" (Geoethics: redefining the human being-Earth system nexus) (13 October).
- IAPG-Turkey at TMMOB-Chamber of Geological Engineers (JMO) did a press release on "Promoting the United Nations (UN) Sustainable Development Goals" to celebrate the International Geoethics Day 2022. The statement was shared with the general public by JMO through its 12 branches and its representatives in all provinces in Turkey (13 October).
- Webinar (in Spanish) on "Geoethics" organized by IAPG-Peru to celebrate the International Geoethics Day 2022 (13 October).
- Giuseppe Di Capua (IAPG Treasurer) gave an invited speech, entitled "Geoethics of advocacy in addressing society's greatest challenges", at the Earth Sciences Festival organized by the IUGS (13 October).
- Webinar entitled "Nurturing Geodiversity: A Road to Sustainable Development", organized by the Geological Survey of India to celebrate the 1st International Day of Geodiversity and the 6th





International Geoethics Day 2022 (14 October).

- Special Session "Geoheritage, geoconservation, geoeducation, geoethics" at the 16th International Congress of the Geological Society of Greece, in Patras, Greece. Conveners: Hara Drinia, Nikolaos Zouros, Asimina Antonarakou (18-19 October).
- The IAPG and ASAGAI Asociación Argentina de Geología Aplicada a la Ingeniería (Argentinian Association of Geology Applied to Engineering) signed a Memorandum of Agreement (MoA). ASAGAI agreed to support the "Cape Town Statement on Geoethics" (that contains the Geoethical Promise, a Hippocratic-like oath for geoscientists: <u>http://www.geoethics.org/ctsg</u>) and to be included among the list of supporting organizations of the statement (25 October).
- New paper: Antić, A., Tomić, N., & Marković, S. B. (2022). Applying the show cave assessment model (SCAM) on cave tourism destinations in Serbia. International Journal of Geoheritage and Parks, 10(4), 616-634. <u>https://doi.org/10.1016/j.ijgeop.2022.10.001</u> (25 October).
- The IAPG was among the supporting organizations of the Zumaia Declaration on geological heritage that was officially released at the event "First 100 IUGS Geological Heritage Sites" held in Zumaia, Basque Coast, Spain: https://www.geoethics.org/files/ugd/5195a5_51b419f15bde4e65b06ed5bf48221c79.pdf (28 October).

November 2022

- IAPG-Chile/Geoethics Group of SGCh organized a virtual meeting on sustainable mining with experts in economic geology (4 November).
- Publication of the call for abstracts for the session EOS4.1 "Geoethics: Geoscience Implications for Professional Communities and Society" and the session EOS2.3 "Climate and ocean education: Geoethics, emergency, fossil fuels, war and more" at the EGU General Assembly 2023 in Vienna, Austria (6 November).
- Webinar (in Greek) entitled "Public communication of seismic hazard issues and geoethical dilemmas", organized by IAPG-Greece and and SafeGreece, Keynote speaker: Gerasimos A. Papadopoulos (IAPG-Greece Co-coordinator), Coordinator: Maria Triantaphyllou (IAPG-Greece Co-coordinator): <u>https://www.youtube.com/watch?v=D4Y6bEAMWfc</u> (8 November).
- Roberto Lencina (IAPG TGRM) gave the talk (in Spanish) entitled "Lithium and energy transition. Ethics and conflict management in the Argentine Nord West for sustainable





development" at the conference held at the Universidad Católica de Salta (UCASAL), Argentina (17 November).

- Publication of the call for abstracts for the session "Geoethics to responsibly manage local and global challenges of our times" at the Australian Earth Sciences Convention (AESC) 2023 in Perth, Australia. This session in co-sponsored by the IUGS (21 November).
- Roberto Lencina (IAPG TGRM) gave the talk (in Spanish) "Social Conflict in Mining, The Pending Agenda" in the panel "Mineral Resources and Energy" at COR-AMB Congreso Nacional de Derecho Ambiental (Nacional Congress of Environmental Law) in Córdoba, Argentina (23 November).
- MinerLima 2022: 8th edition of the International Minerals and Rocks Exhibition in Lima, Peru, organized by IAPG-Peru at the Parque Alfredo Salazar, Miraflores, Lima (free entrance). Conferences on geoethics, deontology in geosciences, geology, crystallography, petrology, lithogeochemistry, paleontology, a field trip, as well as workshops and competitions for school children on the Universe, volcanoes, earthquakes, mass movements, minerals and the identification of rocks, were organized. Students were also involved in choosing the mascot of MinerLima 2022 through a public contest (23-27 November).
- New article published in the IAPG Blog: "The era of crises: facing the choices to build the future" by Silvia Peppoloni (Italy) (<u>http://www.geoethics.org/articles-from-iapg-blog</u>) (30 November).

December 2022

- The IAPG and the GSU Geological Society of Uganda signed a Memorandum of Agreement (MoA). GSU agreed to support the "Cape Town Statement on Geoethics" (that contains the Geoethical Promise, a Hippocratic-like oath for geoscientists: <u>http://www.geoethics.org/ctsg</u>) and to be included among the list of supporting organizations of the statement (1 December).
- 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), and the Portuguese Chapter of the IAH (AIH-GP). Coordinators: Mohammad Salem Hussaini and Asadullah Farahmand (IAPG-Afghanistan Co-coordinators) (1 December).
- Meeting between Dorina Camelia (IAPG-Romania Co-coordinator) and Ranjan Kumar Dahal (IAPG-Nepal Co-coordinator) at the Tribhuvan University, Kathmandu, Nepal (6 December).
- IAPG-Peru meeting for the organization of the 2nd edition of the Peruvian Olympiad in





Geosciences within initiatives for the 16th edition of the International Earth Science Olympiad - IESO 2023 (9 December).

- Promotion of the IAPG and geoethics by Dorina Camelia (IAPG-Romania Co-coordinator) during a meeting at the Department of Geography and Environment, Jagannath University, Dhaka, Bangladesh (12 December).
- The Journal of Geoethics and Social Geoscience (JGSG) published its first, open access, article: Canseco R. and Bellaubi F. (2022). Application of geoethics to university education based on a mining geoethical dilemma case study in the Catalonian Potassic Basin (Spain). Journal of Geoethics and Social Geosciences, 1(1), 1–32. <u>https://doi.org/10.13127/jgsg-24</u> (14 December).
- IAPG-Peru organized a virtual meeting for establishing the organizing committee of the 3rd Conversation on Peruvian Women in Geosciences (3^{er} Conversatorio sobre Peruanas en Geociencias) and defining first actions for the organization of the event (16 December).
- IAPG-Italy contributed to the issue 9 of the magazine "Geologicamente" of the Italian Geological Society (SGI). On this magazine there are dedicated pages on geoethics managed by IAPG-Italy (that is also the Section of Geoethics and Geological Culture of the SGI): <u>https://www.socgeol.it/files/download/pubblicazioni/Geologicamente/GEO9-completodefinitivo.pdf</u> (17 December).

PLANS FOR 2023

- Editorial projects
 - 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, VIII+126 pp., ISBN 978-3031222221. <u>https://link.springer.com/book/9783031222245</u> (in printing).
 - Book: Allan M. and Dowling R. (2023). *Geotourism in the Middle East*. Springer, Cham, XX+372 pp., ISBN 978-3031241697. <u>https://link.springer.com/book/9783031241697</u> (in printing).
 - Book (in Spanish): Alonso R., ed. (2023). *Geociencias y Sociedad 2* (in preparation). 8 chapters by 15 authors.
 - Book: Peppoloni S. and Di Capua G., eds. (2023). *Geoethics for Future: Facing Global Challenges*. Elsevier (in preparation): 41 chapters by 84 authors.





- New book proposals for the SpringerBriefs in Geoethics are expected to be submitted.
- International/National conferences/meetings, lectures, seminars
 - IAPG representatives will attend the 78th Executive Committee meeting of the IUGS -International Union of Geological Sciences in Belfast, United Kingdom (14-17 February 2023).
 - IAPG-Turkey organizes the session "Sustainable use of georesources (including mines, water and energy resources) and geoethics": <u>https://www.jmo.org.tr/resimler/ekler/da6dc071ad64a76_ek.pdf</u> (Conveners: Yüksel Örgün Tutay, Dündar Çağlan, M.Cemal Göncüoğlu) at the 75th Geological Congress of Turkey, organized by the Union of Chambers of Turkish Architects and Engineers Chamber of Geological Engineers (TMMOB-JMO) in Ankara, Turkey (11-15 April 2023).
 - IAPG supports 2 sessions and 1 town hall meeting at the EGU General Assembly 2023: <u>https://www.geoethics.org/egu2023</u> (23-28 April 2023):
 - Session EOS4.1: Geoethics: Geoscience Implications for Professional Communities and Society (Conveners: Silvia Peppoloni, Giuseppe Di Capua).
 - 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).
 - Town Hall meeting: Climate change communication: What policy, education, research, geoethics and action are realistic? (Conveners: David Crookall, Baerbel Winkler).
 - IAPG supports the conference on geoethics, organized by the association "Etnamente" in Linguaglossa, Catania, Italy (20-22 May 2023).
 - IAPG co-sponsors with the IUGS the session "Geoethics to responsibly manage local and global challenges of our times" (Conveners: Silvia Peppoloni, Peter T. Bobrowsky, John Ludden, Sandra Villacorta Chambi) in the theme "Critical role of geoscience in Australia's future": <u>https://aesc2023.com.au/abstract-submission/</u> at the Australian Earth Sciences Convention (AESC) 2023 in Perth, Australia (27-30 June 2023).
 - IAPG supports the session "Exploring geoscience communication" (Conveners: Silvia Peppoloni) at the Joint Congress SIMP-SGI-SOGEI-AIV "The Geoscience paradigm: Resources, Risks and future perspectives" in Potenza, Italy (19-21 September 2023).
 - IAPG supports the Theme 1 "Geoheritage, Geoconservation, Museology & Geoethics" at the





10th International Conference of the African Association of Women in Geosciences and the First International Congress on Geodiversity, Geoheritage, Geotourism, Geoeducation, Geoparks & Sustainable Development Goals (5G & SDGs) in Safi, Morocco. Ezzoura Errami (IAPG Continental Coordinator for Africa) is conference chair; Peter T. Bobrowsky (IAPG Vice President), Silvia Peppoloni (IAPG Secretary General), Margaret Brocx (IAPG Continental Coordinator for Oceania), Ezzoura Errami (IAPG Continental Coordinator for Oceania), Ezzoura Errami (IAPG Continental Coordinator for Africa), Mamoon Allan (IAPG-Jordan Coordinator), Antoneta Seghedi (IAPG-Romania Co-coordinator), José Brilha (IAPG Task Group on Geoethics and Geoheritage) are members of the Scientific Committee of this event (24-28 October 2023).

- IAPG supports 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): <u>https://wlf6.org/forum-themes/</u> at the 6th World Landslide Forum in Florence, Italy (14-17 November 2023).
- IAPG supports the session "AT6-6 Geoética: Experiencias y casos de estudio en Chile" (Geoethics: Experiences and case studies in Chile) (Conveners: Luisa Pinto Lincoñir and Hernán Bobadilla Rodríguez) at the XVI Congreso Geológico Chileno (Chilean Geological Congress), to be held in Santiago (Chile): <u>https://congresogeologicochileno.cl/at6-6-geoeticaexperiencias-y-casos-de-estudio-en-chile/</u> (26 November - 1 December 2023).
- <u>School on Geoethics and Natural Issues</u>
 - Silvia Peppoloni (IAPG Secretary General) and Giuseppe Di Capua (IAPG Treasurer) will work on creating an online course on geoethics.
- 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-December 2023).
- Other activities (main initiatives by IAPG and its national sections)
 - Silvia Peppoloni (IAPG Secretary General) will give an invited talk on geoethics for the celebration of women and girls in science, at the Department of Earth Sciences of the University of Turin, Turin, Italy (10 February 2023).
 - Silvia Peppoloni (IAPG Secretary General) will give an invited talk on geoethics at the





Department of Earth Sciences of the University of Pisa, for the Master Degree in Environmental Sciences, interdisciplinary course on Sustainability of Water Resources and Climate Change, patronized by the Association of Professional Geologists of Tuscany (23 March 2023).

- Silvia Peppoloni (IAPG Secretary General) will give an invited talk at the conference on geoethics, organized by the association "Etnamente" in Linguaglossa, Catania, Italy (20-22 May 2023).
- Giuseppe Di Capua (IAPG Treasurer) will co-organize the session "How can a global geoethics grounded in various ethical traditions help us resist the threats to the climate and the environment?" at the 3rd International Seminar on Global Ethics "Ethical Principles and Moral Traditions Is a Global Consensus Feasible?", organized by Swedish Academy of Letters, History and Antiquities and the CCK Foundation in Stockholm, Sweden (12–16 September 2023).
- Silvia Peppoloni (IAPG Secretary General) and Giuseppe di Capua (IAPG Treasurer) will be key-speakers of the "AT6-6 - Geoética: Experiencias y casos de estudio en Chile" (Geoethics: Experiences and case studies in Chile) at the XVI Congreso Geológico Chileno (Chilean Geological Congress) in Santiago, Chile (26 November - 1 December 2023).
- Silvia Peppoloni (IAPG Secretary General) and Giuseppe di Capua (IAPG Treasurer) will give talks on geoethics at the the "AT6-6 Geoética: Experiencias y casos de estudio en Chile" (Geoethics: Experiences and case studies in Chile) at the XVI Congreso Geológico Chileno (Chilean Geological Congress) in Santiago, Chile (26 November 1 December 2023).
- Silvia Peppoloni (IAPG Secretary General) and Giuseppe di Capua (IAPG Treasurer) will give talks on geoethics at the Universidad Austral de Chile, Valdivia, Chile (December 2023).
- Simon Schneider (IAPG-Germany Co-coordinator), together with Prof. Mrinalini Kochupillai, has proposed a course module on Science Communication and Ethics in Science at TU Munich. This module will be given to students from various programs and is planned to be recorded for online publication too.
- Simon Schneider (IAPG-Germany Co-coordinator), together with Prof. Mrinalini Kochupillai, will offer a workshop at the IGARSS Conference 2023 in Pasadena (USA) about Ethics in Remote Sensing.
- Dominic Hildebrandt and Simon Schneider (IAPG-Germany Co-coordinators) will apply for





funding to conduct a Geoethics Symposium in 2023.

- IAPG will assign the Geoethics Medal 2023: <u>https://www.geoethics.org/geoethics-medal</u>.
- IAPG will celebrate the 7th anniversary of the International Geoethics Day. Hashtag of this event: #geoethicsday2023: <u>https://www.geoethics.org/geoethics-day</u> (12 October 2022).
- IAPG-Afghanistan will continue its activities by organizing webinars related to geoethics topics and attending to international congresses.
- IAPG-Argentina will organize meetings with Latin American members, conferences and round tables on geoethics in Argentina.
- IAPG-Chile will continue to work for drafting a Code of Geoethics for the Chilean geoscientist community.
- IAPG-Chile will organize a training workshop on geoethics for participants at the XVI Congreso Geológico Chileno (Chilean Geological Congress) in Santiago, Chile (26 November - 1 December 2023).
- IAPG-Germany will contribute with the session "Geoethics fostering ethical perspectives in Geosciences" (conveners: Dominic Hildebrandt, Martin Bohle, Barbara Zambelli) to GeoBerlin 2023 "Geosciences Beyond Boundaries - Research, Society, Future", Berlin, Germany (3-8 September 2023).
- IAPG-Iran will contribute with articles on geoethics to geoscience conferences in Iran.
- IAPG-Peru will organize the 9th edition of MinerLima "Feria Internacional de Minerales y Fósiles en el Perú" (International Exhibition of Minerals and Fossils in Peru) (November 2022).
- IAPG-Peru will organize the 2nd Peruvian Geoscience Olympiad.
- IAPG Task Group on Geoethics and Geoheritage will release a White Paper on Geoethics and Geo-Conservation.
- IAPG in cooperation with IFG-Initiative on Forensic Geology, will continue activities to draft the White Paper on Geoethics in Forensic Geology.
- 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 networks and newsletter.





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