

2026 July

IAG/IGU Joint WG for Geomorphology and Society

- Purpose and scope

The progress of various environmental changes, including global warming, has made geomorphology increasingly important in recent years. Geomorphology seeks to discover the truth about the formation of landforms and their impact on society through observation, analysis, and experimentation. This has led to competition with neighboring disciplines, and it has become a research field such as geophysics, environmental studies, and civil engineering. However, it is essential to rediscover and assert the uniqueness and importance of geomorphology in geography.

Furthermore, in terms of the relationship between geomorphology and society, the themes of landform restoration and landform utilization are important. Contemporary issues, such as the assessment of the impact of large-scale nature modification plans, the consideration of alternatives, and the creation of amenities through landform restoration, are attracting attention, and the importance of geomorphological considerations should be emphasized. Collaboration between physical geography and human geography is essential in such studies.

Based on these concerns, the commission considers the following items on the relationship between geomorphology and society through analyzing the benefits and threats of nature.

- 1) Advanced hazard assessment through topographical interpretation
- 2) Impact assessment and mitigation measures against topographical change
- 3) Geomorphology applicable to Geo-parks and Geo-tourism
- 4) Geomorphological education for understanding potential disasters
- 5) Landform and environmental preservation
- 6) Resilience and knowledge of disasters
- 7) Human and nature symbiosis

- Our Website

<http://danso.env.nagoya-u.ac.jp/igu-geomorphology/>

- Membership

The following 12 people are the current steering committee members.

Chair

Dr. Yasuhiro Suzuki

Tectonic Geomorphologist

Professor, Aichi University / Emeritus Professor, Nagoya University, **Japan**

President, The Association of Japanese Geographers

<https://researchmap.jp/read0043838?lang=en>

Secretary:

Hitoshi Saito

Geomorphologist

Associate Professor, Nagoya University, Department of Geography, Graduate School of Environmental Studies, **Japan**

<https://researchmap.jp/hisaito?lang=en>

SC Members:

Dr. Jiun-Chuan Lin

Professor, Department of Geography, National Taiwan University, **China-Taipei**

Dr. T. Ahmet Ertek

Emeritus Associate Professor, Istanbul University, **Türkiye**

Dr. Mihai Micu

Senior Researcher, Institute of Geography, Romanian Academy, **Romania**

Dr. Anita Bernatek-Jakiel

Assistant Professor, Jagiellonian University in Kraków, **Poland**

Dr. Maria Carolina Villaça Gomes

Assistant Professor, State University of Rio de Janeiro, **Brazil**

Dr. Zhou Lin

Professor, Zhejiang University, **China-Beijing**

Dr. Dhanjit Deka

Assistant Professor, Gauhati University, **India**

Dr. Elizabeth Rudolph

University of the Free State, South Africa, **South Africa**

Dr. Avirmed Dashtseren

Director, Institute of Geography and Geoecology, Mongolian Academy of Science, **Mongolia**

Honorary member:

Dr. Shigeko Haruyama

Emeritus Professor, Mie University, **Japan**

- Meetings:

Past activities:

1. The International Association of Geomorphologists and the International Geographical Union Joint Working Group/Committee on "Geomorphology and Society" have been organized at the IAG Regional Conference on Geomorphology in Timisoara, Romania, in September 2025 as follows:

Date: 18 September 2025

TS11: Geomorphology and society

Chairs: Jiun-Chuan Lin, Anita Bernatek-Jakiel

Co-organized by the IAG-International Geographical Union, Geomorphology and Society WG/Commission

Presentations: 6 oral and 3 poster presentations.

2. A research session of "Landslide Geomorphology: Recent Advances in Techniques, Characterization, and Applications" was co-sponsored by the joint commission/working group of IGU/IAG "Geomorphology and Society" at the 11th IAG International Conference on Geomorphology in February 2026 in Christchurch, New Zealand as follows:

Date: 3rd February 2026

Presentations: 21 oral and 10 poster presentations.

This session has focused on recent developments in understanding the geomorphological significance of landslides and their hazards. We explored cutting-edge techniques such as remote sensing, uncrewed aerial systems, photogrammetry, lidar, satellite-based positioning, subsurface surveys, and geospatial analysis to assess and monitor landslide activity, with a particular focus on geomorphological impacts. The session showcased theoretical approaches for characterizing landslide processes, including slope stability analysis, sediment transport modelling, machine learning for landslide detection, and geomorphic connectivity assessments. Applications of these advances were discussed in the context of hazard and risk mitigation, environmental conservation, and the integration of geomorphological insights to support the sustainable development of local communities. Overall, this session bridged the gaps between methodological advances and practical applications in landslide studies.

Members of our working group presented as follows:

Saito H., Uchiyama S., Hayakawa Y.S., Teshirogi K. and Ito C. 2026. Quantifying temporal changes of vegetation recovery in landslides using uncrewed aerial systems.

Taima, O. and **Saito, H.** 2026. Detection of active landslides in the Southern Japanese Alps using DInSAR and SAR Pixel Offset.

In addition to the landslide session, members of our working group presented in the following

sessions: 1) Engineering geomorphology (09D):**Yasuhiro Suzuki**, 2026. Japan's official high-resolution active fault map based on tectonic geomorphology and its potential contribution to earthquake risk reduction, 2) Earth Surface Processes and Carbon Dynamics (08C), **Bernatek-Jakiel, A.**, Musielok, Ł., Stolarczyk, M., Jakiel, M., Nadal-Romero, E., 2026. Soil organic carbon dynamics due to piping erosion; 02H: Novel geospatial and remote sensing methods for geomorphological feature mapping and monitoring AND Geospatial Innovations in Geomorphological Research: Integrating Remote Sensing and Advanced Technologies, **Bernatek-Jakiel, A.**, 2026. Unveiling the magnitude of soil piping at a regional scale: mapping pipe collapses using LiDAR-derived DEM (SE Poland).

Upcoming activities:

- 1) The session “Geomorphology and Society” will be held at the regional conference of the International Geographical Union (IGU) in Istanbul in August 2026. Presentations on a wide range of topics are welcome.