

IAG WG on Urban Geomorphology - Annual Report 2025 (April 1st 2025 to March 31th 2026)

WG description

The scope of the Urban Geomorphology Working Group is to define, and update integrated urban geomorphological investigations in urban areas, focusing on the modeling of urban landscape evolution, the interactions between natural and anthropogenic processes, the understanding of anthropogenic erosion and accumulation phenomena.

The Urban Geomorphology Working Group has been working since 2019. For the second period (2024-2028) the Working Group revised and updated its objectives, in May 2025, starting from previous one.

Specific aim of the Working Group for the second period of research (2024-2028) is to promote the use of advanced technologies for urban geomorphological analysis (remote sensing, 3D modelling and cities digital twins).

To this aim we encourage geomorphology and interdisciplinary scientists to share expertise during international meetings we organize, and to build collaborative projects.

In particular, we are focusing on:

- the effects of anthropogenic forcings on geomorphological processes, with particular attention to climate change
- analyzing and indexing anthropization encouraging standardization, interoperability, and open data practices
- assessing urban geomorphological hazards and integrating geomorphology into urban planning and climate adaptation strategies
- strengthening the role of urban geomorphology in science communication and education supporting sustainable cities goals (e.g., SDGs).

The new objectives are highly challenging, and the Working Group does not expect to achieve them within this period, but rather to continue its activities beyond 2028.

Past activities (*April 1st 2025 to March 31th 2026*)

Organization of annual working group workshops and meetings:

- **May 2025 – 1st Workshop of the IAG-Urban Geomorphology Working Group** (12-15 May, UKEN University, Krakow, Poland), focusing on “Geomorphology, geodiversity, and geosites in urban areas” .

Local organizers of the event:

- Institute of Biology and Earth Sciences of the National Education Commission, Krakow;
- Committee of Geographical Sciences of the Polish Academy of Sciences;
- Institute of Geoecology and Geoinformation of the Adam Mickiewicz University in Poznań;
- Association of Polish Geomorphologists.

31 people attended the event from various countries, including the Czech Republic, Germany, Italy, Great Britain, Tunisia, Cameroon, Mongolia, and Poland.

Workshop activities: keynotes and sessions; GIS workshop for young geomorphologists; IAG Urban Geomorphology Working Group business meeting; mid-workshop tour in Kraków (morphological changes in the Kraków city center); Upper Silesia field trip (post-mining landscape).

The International Association of Geomorphologists funded two grants for Young Geomorphologists.

- [information on the workshop](#)
- [report from IAG Grant Holders](#)
- [summary report on the event](#)



Figure 1 (clockwise): the workshop Opening ceremony, the IAG Urban Geomorphology Working Group business meeting, the mid-workshop tour in Kraków.

- **September 2025**, informal **meeting of the WG** was held during the **IAG Regional Conference in Timișoara (Romania)**

organized to discuss collaborating on assessing the "anthropization index" of the cities object of WG members' research. The discussion led to a call for collaboration aimed at integrating and comparing methods for publishing shared procedure and case studies.

Organization of scientific sessions at relevant international conferences:

- **February 2026, session 05K** "Identification, quantitative assessment, and mapping of anthropogenic landforms in urban areas" in the **ICG-IAG Conference 2026** (Christchurch, New Zealand, February 2-6),

the session received 14 abstracts and took place on 3rd February following the schedule for oral presentation and poster presentation are shown in Figure 2. Interactive [programme of the session 05K](#)

05K	YG	03/02/2026	Mr Pierre-yves Ancelin	LIDAR-Based Analysis of 19th-Century Fortifications in the Reims Region (France): Morphogenesis, Geoheritage, and Environmental Impact
05K		03/02/2026	Assoc. Prof. Francesca Faccini	Geomorphological mapping of ground and underground anthropogenic landforms in a fully urbanised small catchment (Genoa, Italy)
05K	YG	03/02/2026	Dr Michele Delchiaro	Human-induced topographic changes impact geomorphological and hydrogeological hazards: case study from Europe's largest quarry-dump site (Rome, Italy)
05K		03/02/2026	Professor Domenico Calcaterra	Assessing anthropogenic sinkhole hazard scenarios in the city of Napoli (Italy)
05K		03/02/2026	Dr Maggie Creed	Impact of anthropogenic river confinement on river morphology and flood dynamics in a sediment-rich himalayan rivers
05K	YG	03/02/2026	Dr Luca Lämmle	Anthropogenic pressures and coastal changes in transitional environments on the Mediterranean basin
05K		03/02/2026	Dr Anna Malka	Factors Triggering Landslides in Urbanized Areas: Insights from Central European Case Studies
P2.043				
			Identification, quantitative assessment and mapping of anthropogenic landforms in urban areas	03/02/2026 Professor Daniela Ruberti Artificial cavities and sinkholes in the hydrographic district of the Southern Apennines of Italy: findings, architectural variability and risk assessment
P2.044			Identification, quantitative assessment and mapping of anthropogenic landforms in urban areas	03/02/2026 Dr Alessia Pica Diachronic analysis of urban expansion to understand geomorphological controls and anthropogenic forcings on city growth: Rome case study (Italy)
P2.045	YG		Identification, quantitative assessment and mapping of anthropogenic landforms in urban areas	03/02/2026 Dr Luca Lämmle The role of anthropogenic pressures in the evolution of alluvial fans on sedimentary cliffs, NE-Brazil
P2.046	YG		Identification, quantitative assessment and mapping of anthropogenic landforms in urban areas	03/02/2026 Mrs Elise Dujardin Urban gully expansion in tropical cities of Africa

Figure 2 - Schedule of our session in the ICG-IAG: oral (above) and poster presentation (under).

Publication of journal special issues connected to these annual workshops and conference scientific sessions:

- April 2026 - Launching of the **Special Issue** as the proceedings of our session in the ICG-IAG 2026

Eds. Faccini F., Pica A., Lämmle L., *Identification, quantitative assessment, and mapping of anthropogenic landforms in urban areas*. Earth Surface Processes and Landform. Submission deadline: Thursday, 31 December 2026

<https://onlinelibrary.wiley.com/page/journal/10969837/homepage/call-for-papers/si-2026-000353>

Future activities

- Organization of a Webinar on actual trends and research results of the working groups members.
- Social media account creation, gaining attention on our research topics, attracting new WG members
- Planning of the 2° Workshop of the IAG Working Group on Urban Geomorphology
- Publication of SI and synthesis volumes on Urban Geomorphology

Committee members

WG Chairs

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