2025 IACS annual report

INTRODUCTION

The International Association for Cryospheric Sciences (IACS) is the Association of the International Union of Geodesy and Geophysics (IUGG) concerned with snow and ice science and provides expert advice on cryospheric issues to governmental and non-governmental organisations. The objectives of IACS are to:

- promote studies of cryospheric subsystems of the Earth and solar system;
- encourage research in the above subjects by members of the cryospheric community, national and international institutions and programmes, and individual countries through collaboration and international coordination;
- provide an opportunity on an international basis for discussion and publication of the results of the above research;
- promote education and public awareness on the cryosphere, and facilitate the standardisation of measurement or collection of data on cryospheric systems and of the analysis, archiving and publication of such data;
- promote and support diversity, inclusion and equality within the field of cryospheric science, including but not limited to career stage, gender, racial and ethnic identities, and geographic origin.

ADMINISTRATION

To run the day-to-day business of IACS, an Executive Committee consisting of the President, Secretary General and Past President holds monthly teleconferences in which all Bureau members are welcome to join.

The 2025 IACS Annual Bureau Meeting was held after the BACO2025 Joint Assembly on 25 and 26 July at different times of day to accommodate online participation from different time zones by Bureau officers who were unable to attend in person.

No Bureau elections were due in 2025, but Mathieu Morlighem succeeded Liss M. Andreassen as IACS President for 2025-2029 after BACO2025. Liss remains on the IACS Bureau as Immediate Past President (2025-2027).

ACTIVITIES

IACS communications

The IACS homepage (https://cryosphericsciences.org/) is hosted at the World Glacier Monitoring Service in Zurich. IACS newsletters feature announcements and reports of IACS activities (https://cryosphericsciences.org/newsletter/); four newsletters were published in 2025. Announcements are posted on social media through IACS Bluesky and LinkedIn accounts.

IACS had a pod at AGU 2025 for advertising activities and contributed materials for the IUGG stand at EGU 2025.

IACS Working and Standing Groups

IACS facilitates the transfer of research methods and explores new avenues in cryospheric science through Standing Groups and Working Groups devoted to a theme or subject and composed of experts in the particular field of study. The Randolph Glacier Inventory Working Group and the IACS-MRI-WMO Joint Body on the Status of Mountain Snow Cover were granted one-year extensions in 2025 to complete publications. Four new Working Groups were approved in 2025:

- The Working Group on Cryosphere Stewardship aims to research and promote effective frameworks to address the diminishing cryosphere while strengthening coordinated action for cryosphere stewardship;
- The Working Group on International classification of snow avalanches aims to review national and regional variations in avalanche classification to produce a harmonized framework;
- The Continuity approaches for mass balance Intercomparison eXercise (ContinuIX) Working Group brings together the research community developing methodologies to invert glacier surface mass balance from remote sensing datasets;
- The Working Group on Compilation and Standardization of Snow on Sea Ice Data is compiling existing snow on sea ice data and developing a standardized data tool.

The IACS/IPA Standing Group on Glacier and Permafrost Hazards in High Mountains (GAPHAZ) aims to:

- improve international scientific communication on glacier and permafrost hazards;
- compile knowledge related to glacier and permafrost hazards in high mountains;
- work towards greater transfer of information and improved communication between the scientific and governmental communities;
- signpost sources of advice to international and national agencies, responsible authorities and private companies;
- act as a focal point for information for international media during relevant crises.

GAPHAZ launched a new website in 2025 and arranged sessions at the International Mountain Conference (14-18 September 2025, Innsbruck), including a special event on the 28 May 2025 Blatten landslide.

IACS is part of the Global Terrestrial Network for Glaciers (GTN-G) Steering Committee. GTN-G is a framework for internationally coordinated monitoring of glaciers jointly run by the US National Snow and Ice Data Center (NSIDC), the Global Land Ice Measurements from Space (GLIMS) initiative, and the World Glacier Monitoring Service (WGMS).

IACS Joint Commissions

Joint Commissions with other IUGG Associations aim to foster collaboration and coordination on topics of overlapping interests. IACS currently has three Joint Commissions:

- the IACS-IAG Joint Commission on Cryospheric Deformation was involved in organizing an International Workshop on Glacial Isostatic Adjustment (2-6 June 2025, Sidney, British Columbia), a session at EGU 2025 and an online seminar series;
- the IACS-IAPSO Joint Commission on Ice-Ocean Interactions organized a symposium on “Ice sheet-ocean interactions and impacts” at BACO2025;
- the IACS-IAVCEI Joint Commission on Volcano-Ice Interactions held an inaugural online workshop 13-15 January 2025 and an in-person field workshop in Iceland, 19-24 May

2025;
- discussion of forming an IACS-IAHS joint commission continued.

Co-sponsored events and activities

IACS supports events that are of interest to the cryospheric community. Our contributions typically cover part of the travel costs for early career scientists and scientists from developing countries attending cryosphere related events, or IACS awards for scientists in these categories. Funding requests must be submitted for deadlines on 1 April and 1 October, and at least two months prior to the event that is to be supported. Proposers are informed of decisions approximately two weeks after the deadline. IACS co-sponsored seven activities in 2025:

- TIGER Symposium in Geodesy, Gävle, Sweden, 28 September – 1 October 2026.
- International Conference on Himalayan Cryosphere on the eve of the International Year of Glaciers' Preservation, University of Kashmir, Srinagar Kashmir, India, 22-24 September 2025.
- Arctic Frontiers Abroad Greenland: Workshop on Indigenous Knowledge and Local Collaboration, Nuuk, Greenland, 31 July 2025.
- Forum for Research into Ice Shelf Processes (FRISP): Southern Hemisphere, Moreton Bay Research Station, Queensland, Australia, 7-10 July 2025.
- Summerschool on Ice Sheets and Glaciers in the Climate System, Karthaus, Italy, 19-30 May 2025.
- Bringing the Arctic sea ice observational and modelling communities together to assess sea ice loss and its impacts. Boulder, CO, USA, 23 March 2025.
- Workshop on Cryosphere Change and Sustainability in the Indian Himalaya: Celebrating 2025 International Year of Glaciers' Preservation. Amrita University, Kerala, India, 20-21 January 2025.

Meetings

The BACO-25 IAMAS-IACS-IAPSO Joint Assembly 2025 (BACO-25) was held in Busan, Republic of Korea, on 20-25 July 2025, at which IACS organized eight symposia and nine joint symposia. The IACS President and Secretary General attended IUGG business meetings and the site visit for IUGG 2027 in Incheon before the Joint Assembly.

IACS Secretary General Richard Essery represented IACS on the steering committee for the fourth International Conference on Arctic Research Planning (Boulder, USA, 25-28 March 2025).

An application submitted by IACS on behalf of IUGG and all of its constituent Associations to join the International Polar Year 2032-33 Planning Group was accepted. IACS Vice President Andrew Mackintosh and Secretary General Richard Essery are representing IUGG on the IPY Planning Group.

The United Nations International Year of Glaciers' Preservation (IYGP) was launched on 21 January 2025 and World Glacier Day was celebrated for the first time on 21 March 2025. IACS Past President Liss Andreassen is a member of the IYGP Advisory Board and is associate chief editor of a special paper collection on Vanishing Glaciers as a contribution to IYGP. Liss Andreassen is also member of the Ad-Hoc Committee for the Decade of Action for Cryospheric Sciences (2025–2034).

FUTURE ACTIVITIES AND ANNOUNCEMENTS

IACS received an unprecedented 16 applications for support in the 1 October 2025 round, of which six were selected for support in 2026.

IACS will be a partner in the Climate and Cryosphere Open Science Conference 2026 in Wellington, New Zealand.

Development of IACS symposia for the IUGG 2027 General Assembly has begun, and we are in discussions with potential hosts for a joint conference of cryospheric organizations in 2029.

IACS Bureau members in Busan (from left: Farooq Azam, Andrew Mackintosh, Liss Andreassen, Mathieu Morlighem, Richard Essery, Ji-Woong Yang, Anaïs Orsi), and a smooth handover of the IACS Presidency from Liss Andreassen to Mathieu Morlighem.