



IACS

International Association  
of Cryospheric Sciences

<http://www.cryosphericciences.org>

## 2024 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 President-Elect holds monthly teleconferences in which all Bureau members are welcome to join.

As 2024 was a year without an IACS assembly, the Annual Bureau Meeting was held online on 26 June 2024, split into two sessions to allow for maximum participation of IACS officers in different time zones. No Bureau elections were due in 2024, but Ji-Woong Yang (Laboratoire des Sciences du Climat et de l'Environnement, France) was appointed as the Deputy Head of the Cryosphere, Atmosphere and Climate Division (deputies can be nominated by a Division Head and approved by a Bureau vote).

### ACTIVITIES

#### IACS communications

The IACS homepage (<https://cryosphericciences.org/>) is hosted at the World Glacier Monitoring Service in Zurich. IACS newsletters feature announcements and reports of IACS activities (<https://cryosphericciences.org/newsletter/>), and announcements are posted on social media. Four newsletters were published in 2024. The IACS Bureau decided to stop



posting on X and now has Bluesky (<https://bsky.app/profile/iacscryo.bsky.social>) and LinkedIn (<https://www.linkedin.com/company/100993124>) accounts.

IACS had a pod at AGU 2024 for advertising activities.

### 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. Two IACS Working Groups were extended for a year to finish their work in 2024: the working Group on the Randolph Glacier Inventory (RGI) and the Regional Assessments of Glacier Mass Change (RAGMAC) Working Group. Two new Working Groups began their four-year terms in 2024:

- The Working Group on Dynamic Processes in the Marginal Ice Zone aims to enhance understanding through research on sea ice physical and biogeochemical processes, wave-ice interaction and atmosphere-ocean-ice-snow feedbacks;
- The Working Group on Delineation of Glaciers, Ice Sheets and Ice Sheet Basins has been commissioned to develop community standards and methods for mass change estimation that avoid under- or over-counting peripheral ice masses categorized as glaciers or as parts of ice sheets.

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 appointed a new Secretary in 2024 and worked on defining activities for 2024-2025.

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 has been involved in planning for the 2025 Glacial Isostatic Adjustment Workshop in British Columbia, Canada;
- the IACS-IAPSO Joint Commission on Ice-Ocean Interactions hosted an online workshop on ice-ocean interactions in October 2024 and presented the case for a Framework for Observing and Modelling Ice-Ocean Interactions in Antarctica at Ocean Sciences 2024 and EGU 2024;
- the IACS-IAVCEI Joint Commission on Volcano-Ice Interactions appointed new IACS leadership and hosted three online seminars in 2024;

- discussion of forming an IACS-IAHS joint commission has begun.

### Joint bodies

The objectives of the IACS/Mountain Research Initiative/World Meteorological Organisation Global Cryosphere Watch Joint Body on the status of mountain snow cover (JB-SMSC) are to:

- provide robust information on mountain snow cover changes at a global scale;
- better understand processes of snow accumulation and ablation based on existing modelling and observational studies;
- open access to snow data for the research community and operational capacity building for understanding mountain snow cover changes and impacts.

JB-SMSC held a side meeting at EGU 2024 and presented progress on an interactive dashboard for visualizing an inventory of in-situ measurements of mountain snow cover (<https://jb-smsc.github.io/inventory/#map>).

### 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 nine activities in 2024:

- [International Symposium on Geomatics, Remote Sensing and Climate Change in the Arctic, Antarctica and High Mountain Asia](#), Shanghai, China
- Third [Machine Learning in Glaciology Workshop](#), Finse Alpine Research Center, Norway
- [International Summer School in Glaciology](#), McCarthy, Alaska
- [Juneau Icefield Research Program](#), Alaska
- APECS ECR Social Networking Event at ASSW 2024, Edinburgh, UK
- Polar Educators International and IACS [Frozen Frontier through the Lens: A Polar Research Exhibition](#) at ASSW 2024, Edinburgh, UK
- [Workshop on Cryospheric Observation and Modelling for climate change adaptation](#), El Chaltén, Argentina
- [Girls\\* on Ice Aotearoa](#), Mount Ruapehu, New Zealand
- Eighth [Snow Science Winter School](#), Sodankyla, Finland.

## **FUTURE ACTIVITIES AND ANNOUNCEMENTS**

The [BACO-25](#) IAMAS-IACS-IAPSO Joint Assembly 2025 (BACO-25) will be held in Busan, Republic of Korea, on 20-25 July 2025. The IACS President and Secretary General will attend IUGG business meetings and the site visit for EGU2027 in Incheon before the Joint Assembly.

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

The United Nations International Year of Glaciers' Preservation (IYGP) will be launched on 21 January 2025 and World Glacier Day will be celebrated for the first time on 21 March

2025. The IACS President 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.

IACS will be a partner in the [Climate and Cryosphere Open Science Conference 2026](#) in Wellington, New Zealand, and is seeking a host and partner organisations for an assembly in 2027.

IACS has submitted an application on behalf of IUGG and all of its constituent Associations to join the International Polar Year 2032-33 Planning Group.



The 2023-2027 IACS Bureau at IUGG 2023 Berlin.

Back row, left to right: Mohd. Farooq Azam, Rebecca Mott, Anaïs Orsi, Andrew Mackintosh, Regine Hock, Richard Essery, Christine Schøtt Hvidberg

Front row, left to right: Minghu Ding, Liss M. Andreassen, Ted Scambos, Sophie Nowicki, Mathieu Morlighem

Inset, left to right: Sandra Barreira, Alex Fraser, Lauren Vargo, Vincent Vionnet, Ji-Woong Yang