



2025
International
Year of Glaciers'
Preservation

From the International Year of Glaciers' Preservation 2025 to the Decade of Action on Cryospheric Sciences

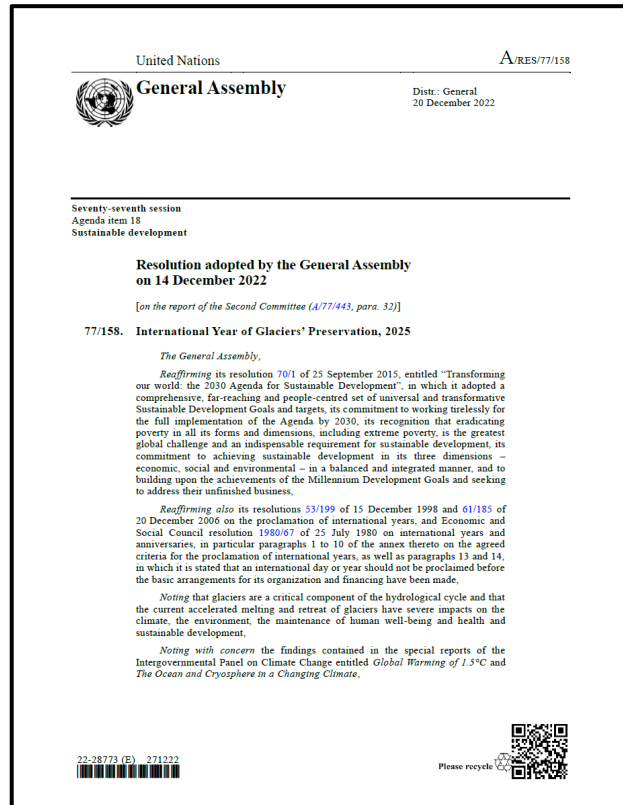
Dr. Koen Verbist, Programme Specialist,
UNESCO IHP

27 June 2025

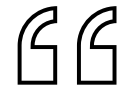
<https://www.un-glaciers.org/>



UNGA Resolution A/RES/77/158



<https://digitallibrary.un.org/record/3998543?v=pdf>



In December 2022, the UNGA adopted the Resolution A/RES/77/158 to declare 2025 as the International Year of Glaciers' Preservation, accompanied by the proclamation of March 21st of each year as the World Day for Glaciers starting in 2025.

UNESCO and WMO are invited to facilitate the implementation of the International Year and observance of the World Day





Objectives



The International Year and World Day for Glaciers aim to **raise global awareness** about **the critical role of glaciers, snow and ice** in the **climate system** and the **hydrological cycle**, and **the economic, social and environmental impacts** of the impending changes in the Earth's cryosphere, as well as to **share best practices and knowledge** in this regard and in addressing issues related to accelerated melting of glaciers and its consequences.

Raise
Awareness

1

Promote
Action

2

Enhance
Scientific
Understanding

3

Strengthen
Policy
Frameworks

4

Strengthen
Financial
Support

5



Task Forces



	Task Force	Lead
1	TF-1: Global Campaign for International Year of Glaciers' Preservation 2025	FAO Mountain Partnership Secretariat <i>Contact: Sara Manuelli</i>
2	TF-2: International Conference on Glaciers' Preservation, Regional Workshops and Capacity Building	International Center for Integrated Mountain Development (ICIMOD) <i>Contact: Neera Shrestha Pradhan</i>
3	TF-3: Research and Monitoring Initiatives	Universidad de Chile <i>Contact: James McPhee</i>
4	TF-4: Policy Advocacy, Partnerships and Resource Mobilization	International Cryosphere Climate Initiative (ICCI) <i>Contact: Pam Pearson</i>



The open-ended call for Task Force members (via an [online form](#)) remains active to welcome applications on a continuous basis.



2025 TIMELINE



Launch event
New York, Paris &
Online

WGD

WMD

21 March 2025
World Glaciers Day

23 March 2025
World Meteorological Day – EW4All,
("Glaciers" among sub focus topics)

22 March 2025
World Water Day – "Glaciers"

WWD

UN WWDR 2025 –
Water Towers: Mountains and glaciers'

29 May – 1 June 2025
International Conference on Glaciers'
Preservation 2025
Dushanbe, Tajikistan

7 June – 10 June 2025
Side events and political launch of the
Decade of Action for Cryospheric
Sciences 2025-2034 at UNOC3
Nice, France



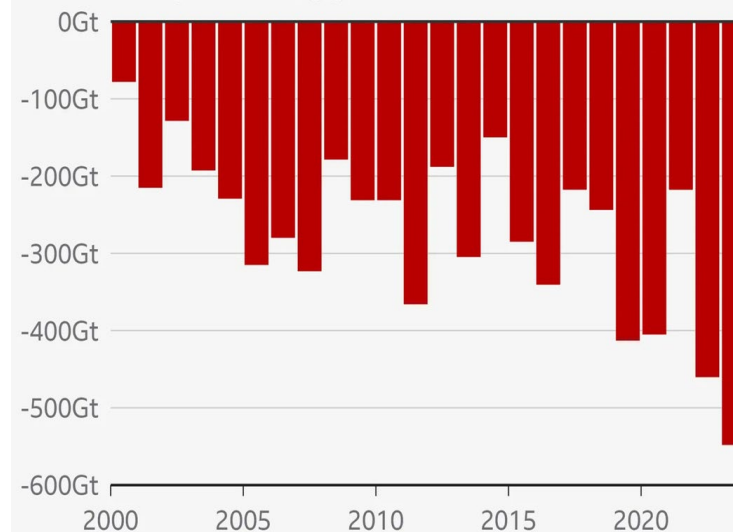
Climate change impacts on snow glacier and water resources

The impacts of cryospheric decline are predicted to increase in severity from extremely serious to catastrophic in respect to the effects cold regions ecosystems, global freshwater availability and variability, ocean circulations and sea level rise.



World's glaciers losing ice at increasing pace

Annual change in mass, gigatonnes



Source: GlacMBIE, 2025, Nature



<https://www.un-glaciers.org/>



nature climate change



Article

<https://doi.org/10.1038/s41558-025-02318-w>

Irreversible glacier change and trough water for centuries after overshooting 1.5 °C

Received: 6 September 2024

Accepted: 17 March 2025

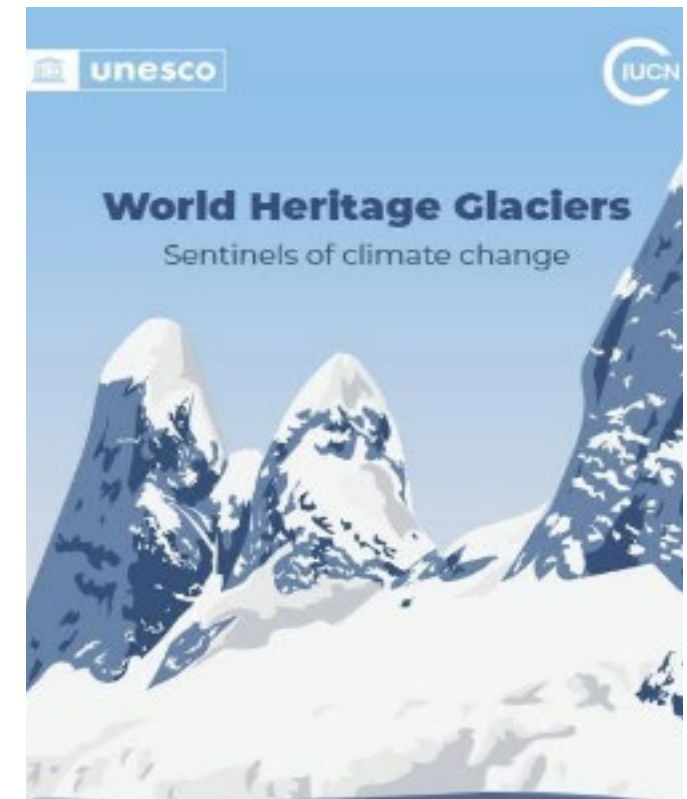
Published online: 19 May 2025

Lilian Schuster¹, Fabien Maussion^{1,2}, David R. Rounce³,
Lizz Ultee^{4,5}, Patrick Schmitt⁶, Fabrice Lacroix^{6,7,8},
Thomas L. Frölicher^{9,7} & Carl-Friedrich Schleussner^{9,10}



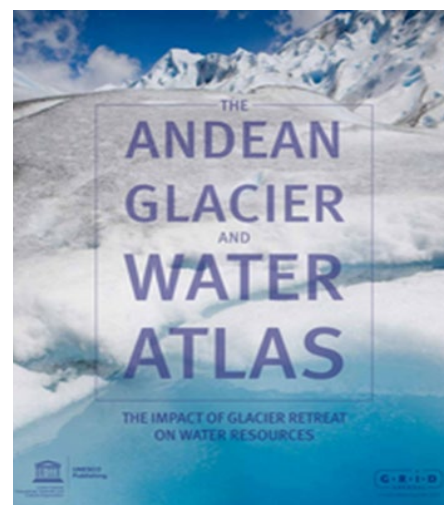
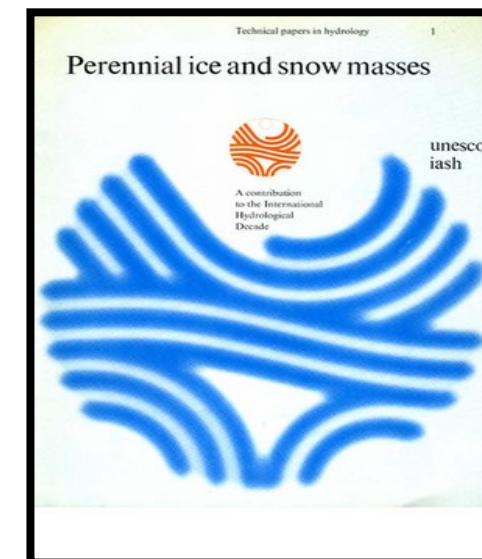
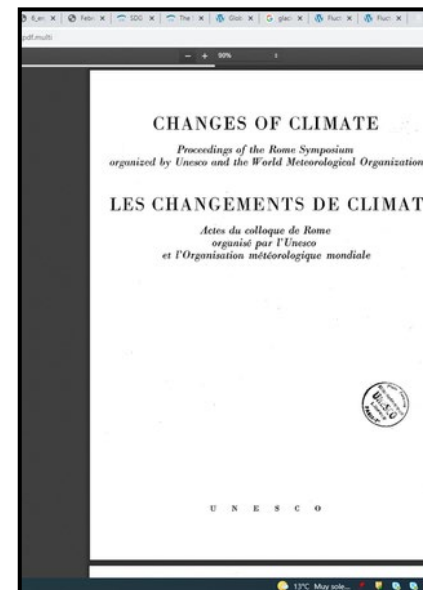
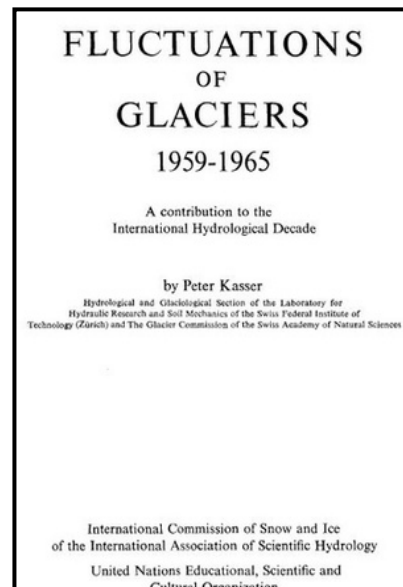
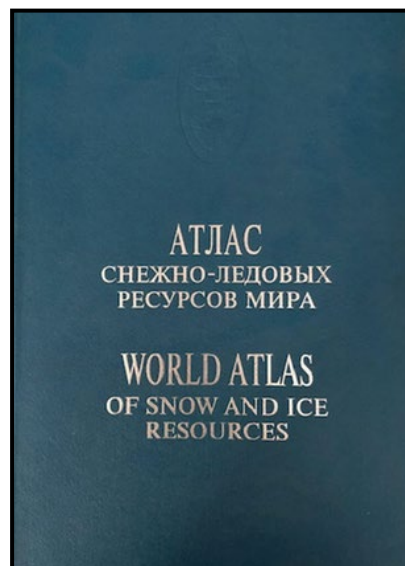
Latest findings from UNESCO World Heritage Glaciers: Sentinels of climate change

- Glaciers are some of the **most valuable indicators for understanding climate change**. Among the most dramatic evidence that Earth's climate is warming is **the retreat and disappearance of glaciers around the world**.
- Around **19,000 glaciers** have been identified in **50 World Heritage sites** (representing almost **10% of all glaciers inventoried on Earth**)
- World Heritage glaciers are retreating at accelerated rate. **Every year they lose 58 billion tons of ice** – equivalent to the combined **annual water use of France and Spain**– and are responsible for **nearly 5% of observed global sea-level rise**.
- **Glaciers in 1/3 of World Heritage sites will disappear by 2050** regardless of the climate scenario. These include glaciers in all World Heritage sites in Africa as well glaciers in iconic sites in Europe and North America such as Pyrenees Mont Perdu (France, Spain) , The Dolomites (Italy) and Yosemite National Park (United States of America)
- **Limiting global warming to 1.5°C could save glaciers in 2/3 of World Heritage sites**





UNESCO's historical commitment to the study of the cryosphere and water resources

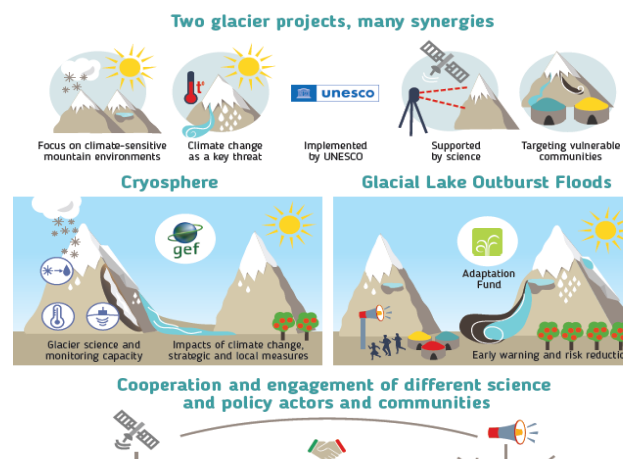
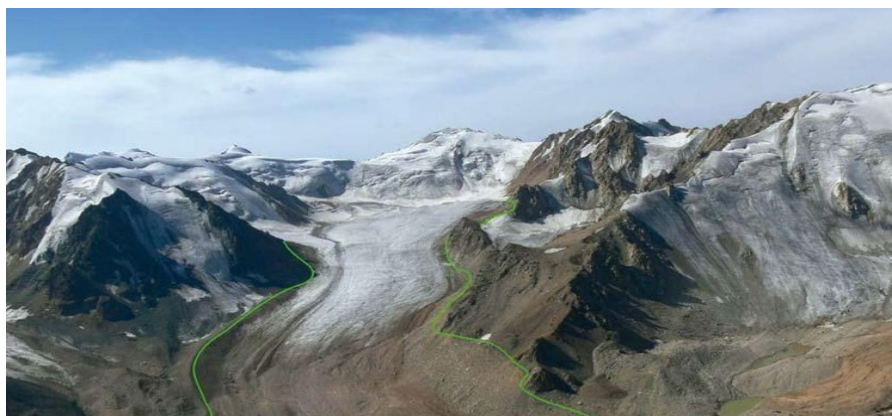




Supporting Member States: Assessment of Snow, Glacier and Water Resources

Assessment of snow glaciers and water resources
in Central Asia (6.2M\$)
(operational 2022)

Reducing vulnerabilities of populations in the Central Asia region
from glacier lake outburst floods in a changing climate (6.5M\$)
(operational in 2021)





Indigenous Knowledge: Glaciers in the Sagarmāthā Region, Nepal

“Snow came in winter. Now it comes in spring. The times have turned upside down.” - Phura Chamji, Phortse

**Indigenous Knowledge systems are key to climate adaptation,
Earth observation, monitoring remote areas, systems-thinking and early
warning systems**

- **Glaciers in Sherpa Cosmology:**
 - ✓ Glaciers and snow-capped peaks are sacred, alive, and spiritually significant.
 - ✓ Names, rituals, and taboos reflect ancestral ties to glaciers and water sources.
- **Observing Glacier Retreat:**
 - ✓ -Elders note declining snow, later snowfall, and “blackened” mountains
- **Glacial Hazards & Cultural Loss:**
 - ✓ Glacier loss threatens Sherpa livelihoods and sacred landscapes. Disasters threaten lives, economy, knowledge transmission and identity.
- **Traditional Forecasting & Climate Response:**
 - ✓ Nawas adjust grazing and harvesting based on snowmelt and seasonal indicators.
 - ✓ Indigenous governance aligns land use with glacier-fed ecosystem signals.





Indigenous Knowledge: Glaciers in Sajama National Park, Bolivia

- **Glaciers in Aymara Territories:**

- Sajama National Park is home to Aymara communities with ancestral ties to the land.
- Glacier retreat and shifting rains threaten ecosystems and livelihoods.

- **Environmental Indicators & Early Warning:**

- Elders read climate variability through animal behavior, snow, and plant cycles.
- These indicators guide decisions on planting, grazing, and water management.

- **Water Stewardship & Climate Response:**

- High-altitude peatlands are managed with rotational grazing and traditional irrigation to boost resilience.
- Community institutions support seasonal adaptation and collective governance.

- **Blending Knowledge Systems:**

- Indigenous observations are integrated with scientific tools, such as satellite monitoring, to track glacier retreat and ecosystem change.
- Co-management with park authorities supports cultural stewardship and adaptation.

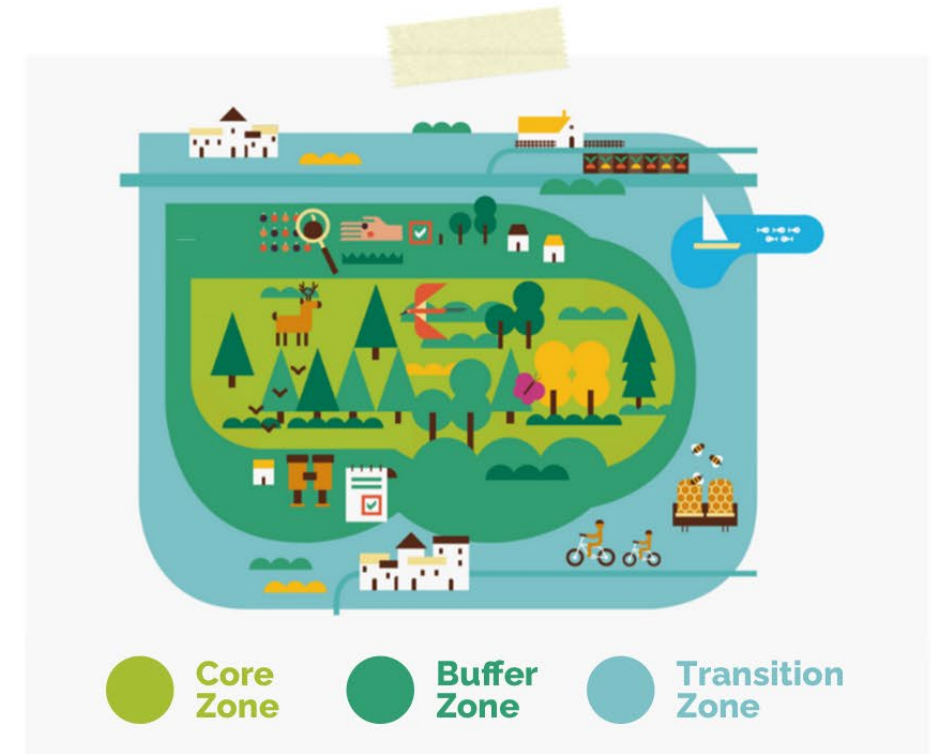


Biosphere Reserves: protecting and understanding the Cryosphere

UNESCO Biosphere Reserves are designated areas that serve as "**learning places for sustainable development**", integrating conservation, sustainable development, and logistical support for research and education.

Role in Cryosphere Protection

- **Monitoring & Research:** Facilitate long-term environmental monitoring and scientific studies on cryospheric changes.
- **Climate Adaptation & Mitigation:** Implement strategies to adapt to and mitigate climate change impacts on cryospheric regions.
- **Community Engagement:** Promote sustainable practices among local communities to reduce environmental footprints.



Biosphere Reserves: protecting and understanding the Cryosphere

Tsá Tué Biosphere Reserve, Canada



It spans approximately 9.3 million hectares in Canada's Northwest Territories. It encompasses Great Bear Lake—**the world's largest pristine Arctic lake—and is the first biosphere reserve entirely managed by an Indigenous community**, the Sahtuto'ine or 'Bear Lake People'.



Contributions

- The community has developed a traditional knowledge database, "Sahtú Benígoḍi," documenting environmental changes and guiding sustainable practices.
- The Délı̨nę community leads conservation efforts, integrating Indigenous knowledge with scientific research to monitor environmental changes and inform land-use planning.
- Initiatives focus on food security and climate adaptation, utilizing participatory research to develop community-driven action plans addressing the impacts of climate change on traditional food systems.



Biosphere Reserves: protecting and understanding the Cryosphere

East Vättern Scarp Landscape Biosphere Reserve, Sweden



It spans approximately 105,520 hectares in southern Sweden. It encompasses Lake Vättern, Sweden's **largest cold-water lake and the fifth largest in Europe**.



Contributions

- Protects ecosystems with over 300 red-listed and cold-adapted species, including glacial relics like grayling (*Thymallus thymallus*), offering critical insight into post-glacial biodiversity.
- Serves as a natural laboratory for long-term research on climate change impacts on freshwater systems and species sensitive to ice cover and temperature shifts.
- Supports conservation-driven land use and community-based monitoring of ecosystem changes, linking biodiversity protection with climate adaptation strategies.



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The Decade of Action for Cryospheric Sciences (2025-2034)



In August 2024, the UNGA proclaimed 2025–2034 as the "Decade of Action for Cryospheric Sciences". This declaration urges global cooperation to address climate threats to glaciers, ice sheets, and permafrost. Enhanced scientific research will drive sustainable solutions to preserve the cryosphere's role in sea level regulation and freshwater availability.

UNESCO is appointed as the **lead agency** for the **Decade of Action for Cryospheric Sciences**, building on its commitment to **environmental preservation**. Over the next decade, it will **collaborate** with **governments, scientific communities, UN agencies, and stakeholders** to address **cryospheric challenges**.



An Ad Hoc Committee will develop:

- A proposed structure for the Working Groups, including scope, membership profiles, thematic or challenge-based configuration, and coordination mechanisms;
- A roadmap for establishing and activating the Working Groups;

Events where the Decade will be highlighted





Brainstorming event – 20th March



“We are all downstream of the cryosphere”

Observing and
Predicting our
Changing
Cryosphere

Socioeconomic
Impact, Vulnerability
and Adaptation

“We cannot adapt to what we do not understand.”

The Decade of Action for Cryospheric Sciences 2025-2034

Education and
Capacity Building

*“It’s not about charity. It’s a
shared responsibility for what we
lose forever if we do not act.”*

Policy, Advocacy, and
Campaign

*“The decade is our chance to make the
cryosphere visible to decision-makers, voters,
children, and heads of state alike.”*

Bridging the
Finance Gap

*“We cannot afford short-term memory.
Advocacy must be consistent, strategic,
and intergenerational.”*



Overarching Challenges and Milestones



OC1: Global Cryosphere Monitoring

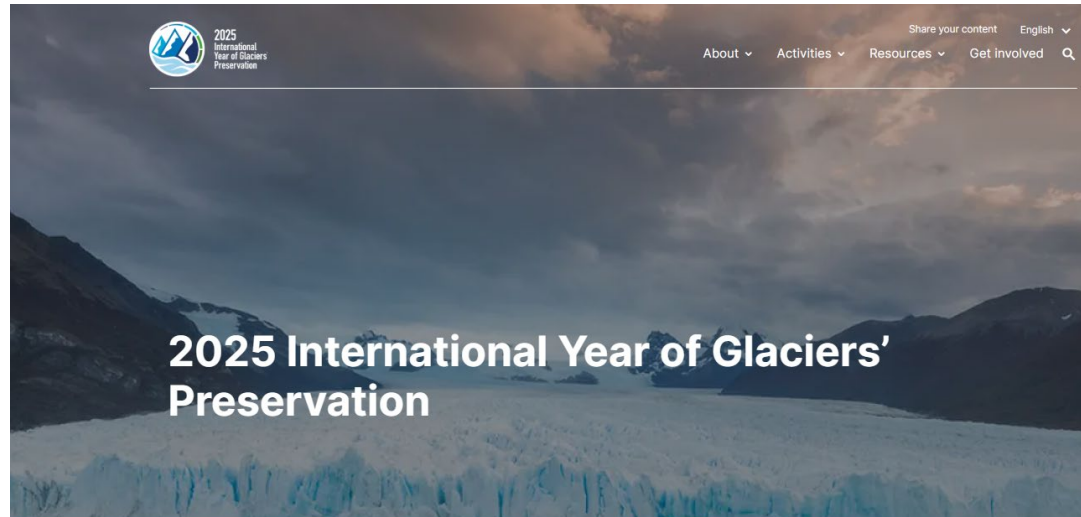
- **MS1.1.** Launch a Global Cryosphere Monitoring Network.
- **MS1.2.** Enhance Monitoring Capabilities.
- **MS1.3.** Release a Digital Cryosphere Atlas

OC2: Actionable Cryosphere Prediction

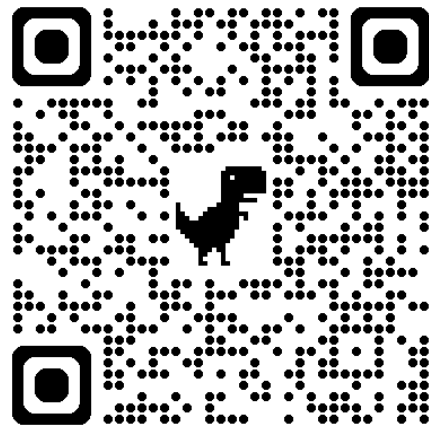
- **MS2.1.** Development of a Coupled Cryosphere Modelling Framework.
- **MS2.2.** Publication of the Cryosphere Risk Scenario Report
- **MS2.3.** Creation of a Decision-support Toolkit



IYGP 2025 – Website



<https://www.un-glaciers.org/>



Featured Content

Official launch event →
Discover more about the official launch event of the International Year of Glaciers' Preservation and how you can contribute to the organization of side-events.

World Day for Glaciers →
Discover more about the celebrations of the 1st World Day for Glaciers and how you can contribute to the organization of side-events.

Key messages →
Glaciers are retreating at unprecedented rates, reshaping landscapes globally. UNESCO and WMO have issued key messages emphasizing glaciers' importance.

Exhibition →
This exhibition aims to raise awareness on the impacts of climate change on mountains and glaciers, and how these changes affect water and food security. Teaser video now available!

Partners →
Discover the many partners supporting the International Year of Glaciers' Preservation.

Task Forces →
Join our Task Forces to implement key activities.

News, events and stories →
Find the latest news, events and stories related to the International Year of Glaciers' Preservation 2025.

Share your content →
If you're a partner, share your content to enrich the website.

Official events

Event
Cat VIII - Symposia
Launch of the 1st World Day for Glaciers and pivot event World Water Day in New York
21 March 2025

Event
Cat VIII - Symposia
Brainstorming session Decade of Action for Cryospheric Sciences in Paris
20 March 2025

Event
Cat VIII - Symposia
Celebrations of the 1st World Day for Glaciers and World Water Day in Paris
20 March 2025

Event
Cat VIII - Symposia
Launch of the International Year of Glaciers' Preservation
21 January 2025

[Load more](#) ↓

<https://www.un-glaciers.org/>



The Cryosphere Decade website – in making

<https://www.un-cryosphere.org>



Our cryosphere - glaciers, ice caps, snow and permafrost -is melting at an unprecedented pace. Urgent action is needed to safeguard these vital frozen areas on which billions rely on for freshwater and climate stability.

Endorsed by the UN, the Decade of Action for Cryospheric Sciences (2025-2034) is a global effort to boost research and drive urgent action to protect Earth's frozen areas. This initiative calls on scientists, governments, and communities worldwide to unite and protect the cryosphere and safeguard the billions of people who depend on them for their survival.



When the cryosphere changes, everything does.
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Thank you