Asian Forum for Polar Sciences

AFOPS

Asian Forum for Polar Sciences

Newsletter, 2025

Content

Asian Forum for Polar Sciences

Asian Forum for Polar Sciences
Newsletter, 2025

Foreword

The Arctic and Antarctica, though geographically distant from Asia, are intrinsically linked to the environmental, climatic, and socio-economic futures of Asian nations. Rapid changes occurring in these fragile regions—ranging from ice loss and permafrost thawing to ecosystem transformations—have profound implications for global sea-level rise, monsoon systems, biodiversity, and global climate stability.

The Asian Forum for Polar Sciences (AFoPS) has played a pivotal role in strengthening and harmonizing these efforts. Serving as a collaborative platform for Asian polar research institutions, AFoPS has fostered scientific cooperation, capacity building, and joint expeditions among its member countries. By promoting coordinated research initiatives, researcher exchanges, and dialogue on emerging polar issues, AFoPS has helped amplify Asia's collective voice and contribution within the global polar science community.

In 2025, AFoPS made significant progress after formally establishing its Secretariat at the Polar Research Institute of China (PRIC). This new institutional mechanism improved the coordination, communication, and implementation of forum-wide activities among member countries. India has assumed the Chair of AFoPS for 2025–2026, focusing on collaborative initiatives among the AFoPS countries. The Annual General Meeting held during 19–20 September 2025 in Goa, India, brought together member delegations to advance joint research collaborations and partnership strategies in Arctic and Antarctic sciences.

This newsletter brings together major activities, achievements, and collaborative initiatives undertaken by Asian countries in polar regions, with particular emphasis on the role of AFoPS in facilitating regional and international cooperation. It reflects a shared vision of advancing scientific excellence, nurturing the next generation of polar researchers, and contributing constructively to global efforts aimed at understanding and protecting the polar regions.

As the pace of environmental change accelerates, sustained collaboration, trust, and scientific solidarity are more important than ever. It is our hope that this newsletter will inform, inspire, and encourage deeper engagement among scientists, policymakers, and young researchers across Asia and beyond.

Wishing you season's greetings and a new year filled with happiness, collaboration and success.

Dr. Thamban Meloth
Chair of the AFoPS
Director, National Centre for Polar and Ocean Research

PART I AFoPS 2025 Annual Events

AFoPS 20 Year Achievements

20 Years of Asian Forum for Polar Sciences (AFoPS)

Inaugural AFoPS meeting in Jeju, Republic of Korea (2004)

The Asian Forum for Polar Sciences (AFoPS) is an international organization established in 2004 to promote cooperation and advancement in polar sciences among Asian countries. It serves as a platform for information exchange, research collaboration, and logistics cooperation among Asian polar science institutions. AFoPS aims to encourage cooperative research activities, involve more Asian countries in polar sciences, and share the achievements of Asian countries with the international polar communities. Over the past 20 years, AFoPS has made significant contributions to polar research and collaboration, fostering scientific cooperation and facilitating the exchange of expertise, data, and resources among its members. 2024 marked the twentieth anniversary of AFoPS.

Future Endeavors

Looking forward, AFoPS aims to have a more prominent presence and a contribution in the international polar community. However, it is important to note that AFoPS does not intend to form an exclusive regional bloc. Instead, AFoPS is determined to establish a channel and leverage it to maximize contributions to the global community, aiming for greater output than what can be achieved when AFoPS members work individually and in isolation.

20 Years of AFoPS: Major Achievements

• Overview

Over the past 20 years, AFoPS has achieved significant milestones in polar research and collaboration playing a crucial role in fostering scientific cooperation among Asian countries in the Antarctic. Through collaborative research expeditions and shared logistics, AFoPS has facilitated the exchange of expertise, data, and resources, leading to various successes.

In the early years of AFoPS, members gave regular updates on their national polar activities. Such robust information sharing enabled the launch of logistics cooperation in Antarctic science between AFoPS members.

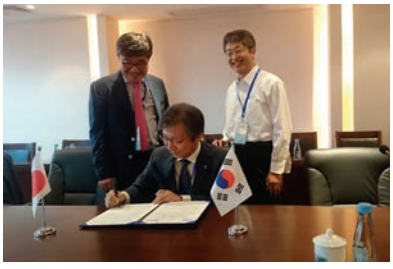
MOU Signing Thailand-China Science and Technology Collaboration, August, 2022

AFoPS V in Shanghai (2006)

AFoPS-XIV and 10th Anniv. Symposium (2014 Port Dickson, Malaysia)

Malaysian Scientists join the Korean Jang Bogo Station Expedition, 2017

MoU between PRIC & KOPRI (2018)



KOPRI & NIPR MoU Signing Ceremony (2019)

Thailand Scientists Joined the 13th Chinese Arctic Cruise with Xue Long 2, 2023

Lake Drilling Cooperation drilling programme between Japan and India

JARE Winter Training Course opened for AFoPS members

Country	2015	2016	2017	2018	2019	2020	2022	2023	Total
China		1		2	2	1	1	1	8
India	1				1	1	2	1	6
Iran	3	1			1				5
Japan		1	3	1	1				6
Malaysia	1		2		1				4
Nepal	1								1
Turkey			1	1					2
Vietnam		2	2	2	1				7

KOPRI opened fellowship Awardees to AFoPS members and Observers (2015-2023)

• AFoPS Joint Publication

To increase the visibility of Asian polar research, AFoPS began to produce joint publications in the form of special issues in academic journals. The first AFoPS journal was published in 2013 as a special issue in Advances in Polar Science through efforts led by China. The second joint publication was led by Japan and published in Polar Science in 2015 followed by the third joint publication led by India and Malaysia in Current Science in 2018. The fourth and most recent joint publication was led by Korea and published in Environmental Research in 2022 as a special issue.

(From left to right) Cover pages of AFoPS Joint Publications (Yang, 2013; Watanabe et al., 2015; Mohan & Wong, 2018; Kim et al. 2022)

• Cooperation with other International organizations

AFoPS enhanced its position as a regional scientific forum and engaged with various international partners including the Scientific Committee on Antarctic Research (SCAR) and the International Arctic Science Committee (IASC). Specifically, a Memorandum of Understanding (MoU) with SCAR and IASC was signed in 2016 (Colombo, 2019).

Signing of the MoU between AFoPS, IASC, and SCAR (2016), and renewal of the MoU (2021)

• Capacity Building Efforts

AFoPS members not only cooperated in science and logistics but also organized various capacity-building programs, workshops, and training sessions to enhance the research capabilities of both early and established researchers in the Asian region. Initiatives such as the AFoPS Webinar for early career researchers, fellowship programs from AFoPS members, hosting of field training sessions have promoted skill development, knowledge transfer, and the nurturing of young polar scientists among AFoPS members.

10th anniversary Newsletter in 2014

AFoPS Webinar for early career researchers held online (2021)

The 20th Asian Forum for Polar Sciences (AFoPS) Anniversary Conference was held in Shanghai

AFoPS Link: https://afops.org/home/news?id=10132

Editor: HAN Yi (Polar Research Institute of China, PRIC)

The 20th Anniversary Conference of the Asian Forum for Polar Sciences (AFoPS 20) was held from October 27 to 29, 2024, at Shanghai Jiao Tong University, co-hosted by the Polar Research Institute of China (PRIC) and the university. Over 100 delegates from six AFoPS member countries (China, Japan, South Korea, India, Malaysia, and Thailand) and invited representatives attended, celebrating the 20th anniversary of AFoPS. Participants visited the R/V *Xuelong 2*, sparking discussions on polar expedition equipments and technological capabilities.

Dr. Kim Yeadong delivered the AFoPS 20 keynote speech, which systematically reviewed two decades of forum cooperation and shared a future vision. Member countries shared updates on research progress, plans, polar education, and international cooperation. The AFoPS 20 also featured two thematic forums on international programs and data sharing, involving AFoPS members and experts from the Australian Antarctic Division, TUBITAK Marmara Research Center Polar Research Institute (Turkey), and the Southern Ocean Observing System to strengthen polar cooperation, particularly in the planning process for IPY5 and ICARP IV.

During the closed-door meeting, it was decided that the National Centre for Polar and Ocean Research (NCPOR, India) would assume the AFoPS rotating presidency for 2025/2026, while PRIC would host the AFoPS permanent secretariat.

AFoPS delegations visting the R/V *Xuelong 2*

AFoPS 20 group photo

The three founders' reunion

AFoPS Strengthens Polar Collaboration at 2025 Special Meeting

AFoPS Link: https://afops.org/home/news?id=10136

Editor: HAN Yi (Polar Research Institute of China)

The Asian Forum for Polar Sciences (AFoPS) held its 34th Special Meeting at Boulder during ASSW 2025, focusing on advancing regional cooperation and strategic initiatives in polar researches.

The Secretariat reported recent activities, including JTRES cruise organized by PRIC and Thailand's participation in CHINARE-41, alongside the establishment processes and challenges. Members such as India and Malaysia shared updates on national polar expeditions, showcasing advancements in climate and ecosystem studies. AFoPS will collaborate with *Advances in Polar Science* to publish a special issue in 2025/2026, highlighting member contributions to global polar science.

The special meeting developed a remarkable discussion of the roadmap for the planning of 5th International Polar Year (IPY5).

AFoPS Group Photo held its 34th Special Meeting at Boulder during ASSW 2025

2025 Asian Forum for Polar Sciences (AFoPS) Annual General Meeting Concludes Successfully in Goa, India

AFoPS link: https://afops.org/home/news?id=10189

Editor: AFoPS Secretariat

The 2025 Annual General Meeting (AGM) of the Asian Forum for Polar Sciences (AFoPS) was successfully held in Goa, India, September 19–20. Hosted by the current chair, National Centre for Polar and Ocean Research (NCPOR) of India, the meeting gathered 41 national delegates, coordinators, and polar scientists from the six AFoPS members (China, Japan, South Korea, India, Malaysia, and Thailand) and international polar organizations.

The 2024–2025 period marks the first operational year of AFoPS under the new structure following the successful celebration of its 20th anniversary in 2024, with the Polar Research Institute of China (PRIC) as standing role of the AFoPS Secretariat and collaborating with the chair, NCPOR. The 2025 AGM featured several forums: the "National Report", the "IPY5-AFoPS Roadmap for Collaborative Endeavours", the "Polar Infrastructure & Logistics Collaboration", and closed-door AFoPS meetings.

Major Achievements

(1) IPY5-AFoPS Roadmap for Collaborative Endeavours

Based on the feedback from the IPY 5 Questionnaire initiated by the Secretariat, a dedicated IPY5-AFoPS Roadmap forum was organized at this AGM. Subsequently, the delegates engaged in extensive discussions on how to closely advance the collaborative vision under the AFoPS framework and initiate international cooperation in Asia in preparation for the upcoming IPY-5.

The discussions focused comprehensively on fostering the next generation of polar science leaders in Asia, initiatives for operating Asia's IPY 5 international program, and planning next steps, including collaboration pathways and key measures. A series of outcomes were achieved such as a proposed IPY 5 AFoPS working group for further in-depth discussions, paving the way for the potential of Asia's IPY 5 international program. Additionally, PRIC proposed an education program such as establishing an AFoPS Summer School to cultivate the next generation of polar science leaders in the region.

(2) APS cooperations with AFoPS

The cooperation between the journal Advances in Polar Science (APS) and AFoPS was fully discussed. The authorization is granted to display "APS endorsed by AFoPS", along with the AFoPS Logo on the APS website, print version, and other promotional materials.

During the AGM, the Secretariat reported to the AFoPS Committee on its operational progress in 2025. In aiming to how to develop into a stable hub for comprehensive cooperation in polar affairs and information exchange within Asia, AFoPS committee shared with practical advices and strong supports. Noteworthy, Terms of Reference for the AFoPS Secretariat was adopted on this AGM successfully.

AFoPS AGM 2025 Venue

AFoPS AGM 2025 Group Photo

Advances in Polar Science becomes an officially endorsed journal of AFoPS

AFoPS link: https://afops.org/home/news?id=10170

Editor: ZHANG Sai (Polar Research Institute of China)

Advances in Polar Science (APS) has been officially endorsed by the Asian Forum for Polar Sciences (AFoPS). The endorsement was approved during the AFoPS annual meeting in Goa, India, August 2025.

As an endorsed journal of AFoPS, APS is now authorized to use the designation “Officially Endorsed by AFoPS” and to display the AFoPS logo across all its publications and platforms.

APS will collaborate with AFoPS to organize special issues on polar science and support early-career researchers from Asian countries in publishing their work. As an emerging force representing the aspirations of about 60% of the world’s population, Asian countries are poised to play a more significant role in the polar research during the coming years. This collaboration underscores the journal’s unique role as the only English-language polar science journal based in China and across developing nations, committed to advancing global cooperation and knowledge sharing in polar research field.

APS—AFoPS endorsed journal

PART II National Reports of AFoPS Members

2.1 PRIC, China 2025

The 40th Anniversary of Chinese National Antarctic Research Expedition (CHINARE)

AFoPS link: https://afops.org/home/news?id=10156

Editor: ATCM47 Chinese delegation

2024 marked the 40th anniversary of China's polar expeditions. Since the first Chinese National Antarctic Research Expedition (CHINARE) in 1984, the expeditions have conducted extensive research across multiple disciplines and established a comprehensive network supporting long-term observation and monitoring programs has been established.

To honor this milestone and enhance public awareness of environmental protection and inspire young generations to carry on the great polar causes, a series of anniversary activities were held throughout 2024–2025. Activities included exhibitions, symposiums, school outreach & education programs, open day events, commemorations & seminars on the Antarctic stations. Numerous publications and audio/video materials were also produced. Millions of participants were engaged both in person and online.

A series of anniversary events were held through the whole celebration year as:

1. National Exhibitions in Celebration of 40 Years of Chinese Arctic and Antarctic Expedition;

2. International Symposium on Polar Sciences: The 40th Anniversary of CHINARE;

3. Polar Classroom Program;

4. Open Day Events at different locations as Lyttelton (New Zealand), Hong Kong (China), Qingdao (China), Shanghai (China);

5. Commemorations of the 40th Anniversary of the Great Wall Station;

6. Commemorative Products of the 40th Anniversary of CHINARE;

Through these outreach efforts, China aimed to share the achievements of its Antarctic expeditions and the broader international community, emphasizing principles of peaceful use, scientific research, and cooperation as upheld by the Antarctic Treaty. The widespread activities have planted seeds of awareness—particularly among youth—for the continued pursuit of polar science in the decades to come.

International Symposium on Polar Sciences- The 40th Anniversary of CHINARE

Global Conference on Climate Change-Polar Studies-Environment and Climate Change at CUHK

The Joint Twilight Ross Sea Ecosystem Studies (JTRES)

AFoPS link: https://afops.org/home/news?id=10133

—Completion of the 41st CHINARE Concludes with the first successful Autumn Ecosystem Research Cruise in the Ross Sea, Antarctica

The 41st CHINARE successfully concluded with the return of R/V *Xuelong 2* to Hobart Port, Australia, on April 26th. The voyage included the first international cruise, initiated by PRIC, targeting the Ross Sea ecosystem during the Antarctic autumn. It brought together 91 scientists from nine countries, including China, Australia, South Korea, the United State, Malaysia, Norway, Thailand, New Zealand, and the United Kingdom. The team comprised 12 international researchers and 32 domestic experts from institutions including PRIC, Shanghai Jiao Tong University, Zhejiang University, and the Chinese Academy of Sciences.

• Fieldwork Highlights

Facing extreme conditions such as –26°C and high sea ice density, the team carried out 20 days of on-site oceanography investigations from March 27th to April 15th , 2025. Leveraging *Xuelong 2*' s icebreaking capabilities, the JTRES researchers focused on three key research areas:

(1) Carbon Flux Dynamics: Convection vertical fluxes of heat, salt and carbon processes in polynya forming deep and bottom waters;

(2) Ecosystem Energy Flow: Biomass pathways of twilight foodweb and sources of bio-energy fueling the foodweb;

(3) Survival Strategies: Overwintering strategies of organisms and populations.

• Scientific Achievements

The expedition completed 24 multidisciplinary stations across four transects, including one 24-hour continuous observation site. Tasks such as biological trawling, water sampling, and sediment collection were fulfilled or exceeded targets. Advanced equipment—including Acoustic Doppler Current Profilers (ADCP), fish detectors, and ice/bird/mammal observation systems—enabled comprehensive data collections. Over 5,000 samples (water, aerosols, sediments, organisms, and sea ice) were collected, and 34 specialized buoys were deployed successfully.

• Scientific Impact

This voyage delivered the first autumn oceanography survey of Antarctic ecosystems, shedding light on critical trophic-level adaptations during polar winters. The breakthrough would enhance comprehensive understanding of biodiversity resilience of extreme environments and enrich knowledge of climate change from the perspective of the Southern Ocean.

Gibeom RYU and Jihye PARK from KOPRI, Dr.Muhammad Hafiz Bin BORKHANUDDIN from Universiti Malaysia Terengganu, Dr. Udomsak DARUMAS from Chulalongkorn University, Thailand were invited to join the JTRES.

JTRES, 2025 (Photographer: MA Mingwei)

JTRES group photo (Photographer: Huang Taoming)

China's icebreaker *Xuelong* returns to Shanghai after fruitful Antarctic survey

AFoPS link: https://afops.org/home/news?id=10149

Source: Xinhua, https://english.news.cn/20250408/851f3bada3f24aa8b8e3bc8543a6c971/c.html

China's research icebreaker *Xuelong*, or *Snow Dragon*, berths at a base dock in Shanghai, east China, April 8, 2025. China's research icebreaker *Xuelong*, or *Snow Dragon*, arrived in Shanghai on Tuesday, marking the completion of key missions in the country's 41st Antarctic expedition, according to a press conference held on Tuesday. The expedition involves 516 members from 118 domestic and international institutions and is being carried out by three vessels. The cargo ship *Yong Sheng* returned to China in January, while the research icebreaker *Xuelong 2* remains on mission in the Ross Sea and is expected to return to Shanghai in June. *Xuelong* completed a 159-day journey covering over 27,000 nautical miles, from its departure from Guangzhou, capital of south China's Guangdong Province, on Nov. 1, 2024, to its arrival on Tuesday.

CHINARE 41st completed its expedition and being back to Shanghai Harbor

The expedition involves 516 members from 118 domestic and international institutions and is being carried out by three vessels. The cargo ship Yong Sheng returned to China in January, while the research icebreaker *Xuelong 2* remains on mission in the Ross Sea and is expected to return to Shanghai in June, according to Long Wei, an official with the State Oceanic Administration.

Xuelong completed a 159-day journey covering over 27,000 nautical miles, from its departure from Guangzhou, capital of south China's Guangdong Province, on Nov. 1, 2024, to its arrival on Tuesday.

The polar expedition achieved breakthroughs in areas such as technological and methodological innovation, large-scale application of domestically developed equipment, and international collaboration. It is expected to bolster research on rapid changes in Antarctica and contribute to effective responses to global climate change.

Wang Jinhui, leader of the expedition team, said that the mission primarily focused on establishing a clean energy system, incorporating wind, solar and hydrogen power as well as energy storage facilities at China's Qinling research station in Antarctica. He added that the team also achieved significant outcomes, including the collection of data on ice sheets and penguin habitats, through investigation, monitoring, and scientific research.

China has involved multiple countries in its ongoing oceanic survey in the Ross Sea and continues to engage in various international research and collaboration projects, according to Wang.

China concludes 15th Arctic Ocean scientific expedition

AFoPS link: https://afops.org/home/news?id=10181

Editor: Zhao Lei (China Daily)

Source: https://www.chinadaily.com.cn/a/202509/26/WS68d69107a3108622abca3345.html

China's 15th scientific expedition to the Arctic Ocean concluded on Friday as the last members of the expedition team returned to Shanghai. Carrying the mission crew, the *Xuelong 2* icebreaker arrived at its home port in Shanghai on Friday morning, marking the end of China's largest-ever scientific exploration in the Arctic Ocean, according to the Ministry of Natural Resources.

The expedition was jointly carried out by four vessels — *Xuelong 2*, *Jidi*, *Shenhai 1* and *Tansuo 3* — and further advanced China's understanding of rapid changes in the Arctic Ocean and their impact, providing crucial support for assessing and responding to global climate change, the ministry said in a statement.

Xuelong 2 and *Jidi* completed tasks including comprehensive marine environmental surveys and manned deep-sea diving support. Significant progress was achieved in areas such as multidisciplinary surveys in the ice edge zone and three-dimensional coordinated observation of atmosphere-ice-ocean systems.

With the support of *Xuelong 2*, the *Shenhai 1*, carrying the *Jiaolong* manned submersible, achieved China's first manned deep-sea dive in Arctic ice-covered waters — a milestone reflecting the country's growing capacity to access and explore the deep sea, according to the statement.

Preliminary studies revealed major differences in benthic organism density, biodiversity and individual body size across Arctic sea areas. The findings provide support for uncovering spatial distribution patterns of polar deep-sea benthic organisms and assessing the impacts of climate change on deep-sea ecosystems, the ministry said.

China's manned deep-sea submersible *Jiaolong* is about to leave its mothership *Shenhai 1* (*DeepSea No. 1*) in the Arctic Ocean, Aug 6, 2025 (Photo: Xinhua)

The scientific expedition team members deploy ice-based buoys in the high-latitude waters of the Arctic Ocean, Aug 25, 2025 (Photo: Xinhua)

2.2 NCPOR, India 2025

Indian successfully launched the 44th Scientific Expedition to Antarctica

AFoPS link: https://afops.org/home/news?id=10140

Editor: Swati Nagar(NCPOR, India)

India successfully launched its 44th Indian Scientific Expedition to Antarctica (44-ISEA). In total, 103 participants (including scientific and logistic teams) from 18 organizations and universities were inducted in batches, while the 43rd ISEA winter team was de-inducted. Key highlights included redeployment of an ice-tethered mooring system in Quilty Bay, real-time ocean and meteorological data collection, and sampling for ecological studies, etc. A deep ocean glider was deployed in the Southern Ocean on 3rd February 2025 and retrieved on 7th April 2025, covering ~1200 km and collecting crucial oceanographic data.

Two major international collaborations were undertaken during 44th ISEA: the STAPLES (Spatio-Temporal investigations of Polar Lacustrine Systems) project, involving scientists from India, Belgium, and Japan, focused on sediment coring collecting various sediment cores from different lakes of Larsemann Hills along with samples for Lake Biogeochemistry, surface exposure dating, etc; and the SENS (Sub Shelf Exploration of Nivl Ice Shelf) project, in collaboration with the University of Bergen, conducted under-ice bathymetry surveys beneath the Nivl Ice Shelf using hovercraft-based radar systems. With the logistic support from Maitri-Indian station in Antarctica, the team has mapped 400+ km of Nivl Ice Shelf using ice-penetrating radar.

Deployment of Glider in the Southern Ocean

International team of STAPLES with the lake core

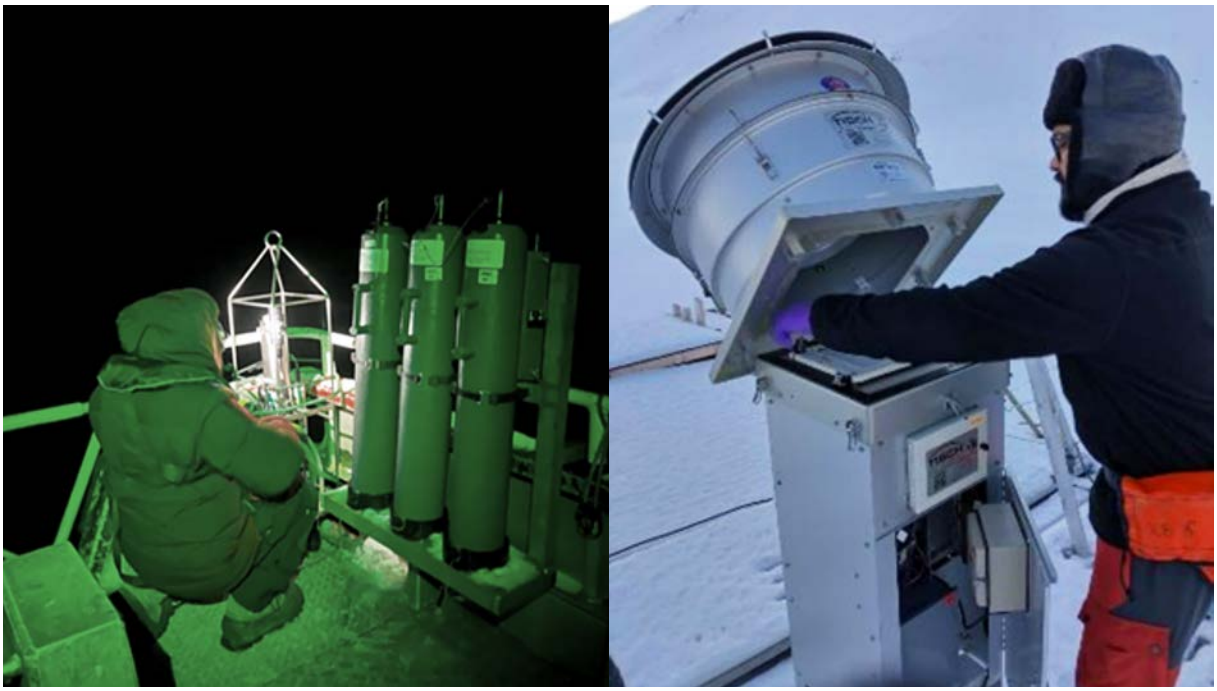
15th Indian Arctic Expedition 2024-2025 launched successfully

AFoPS link: https://afops.org/home/news?id=10142

Editor: Swati Nagar(NCPOR, India)

During 2024–2025, the 15th Indian Arctic Expedition reinforced India's ongoing scientific engagement in the Arctic. A total of 35 projects were implemented in six summer batches (May–October 2024) and four winter batches (November 2024–March 2025). The teams conducted environmental sampling in Kongsfjorden, collecting water, sediment, and air for microbiological and biochemical analyses. Instruments like the All Sky Imager, Global Navigation Satellite Systems (GNSS) receivers, and Radio Frequency Interference (RFI) survey antennas were installed at the Gruvebadet Atmospheric Laboratory in Svalbard to monitor atmospheric conditions and study microbial diversity, particulate matter, and climate change impacts.

International Collaboration: A parallel effort by NCPOR included participation in the YESS-IKY international project in collaboration with Lehigh University (USA) and Alfred Wegener Institute (Germany) during November 2024 to January 2025. The study focused on microbial community dynamics and their role in carbon cycling in extreme Arctic conditions.



Field activities undertaken by members of the Indian Arctic Expedition 2024-2025

India's Expanding Global Footprint in Polar Governance and Science (2024-2025)

AFoPS link: https://afops.org/home/news?id=10148

Editor: Swati Nagar(NCPOR, India)

India reinforced its commitment to science-based polar governance at the 46th Antarctic Treaty Consultative Meeting (ATCM) and 26th Committee for Environmental Protection (CEP) in Kochi (May 20 to 30, 2024), organized by the Ministry of Earth Sciences (MoES) through NCPOR. The meetings underscored international commitment to the protection and sustainable management of Antarctica. India submitted four working papers and fifteen

information papers, and announced its plan to establish a new Antarctic research station (Maitri-II). During the 15th India-UAE Joint Commission Meeting, a Memorandum of Understanding (MoU) on Antarctic cooperation was also signed with Norway on 13 December 2024. The MoU will foster collaboration in polar research, operations, and capacity building—reinforcing joint commitment to climate action, sustainable development, and environmental protection in the Polar Regions.

India's polar engagement continues to grow through diplomacy, science, and multilateral partnerships. NCPOR scientists strengthened India's presence in international polar research by actively contributed to major meetings, conferences and forums. Nine NCPOR officials delivered 12 presentations and co-chaired six sessions at SCAR Open Science Conference 2024 in Pucón, Chile, contributing to international groups like SCAR RINGS, International Collaboration Effort for Improving Paleoclimate Research in the Southern Ocean (ICEPRO), Southern Ocean Observing System (SOOS), and the SCAR Physical Sciences Group.

India participated in polar governance meetings, reaffirming its commitment to international polar research collaboration. India participated and put forth their research and opinions in the 36th Council of Managers of National Antarctic Programs (COMNAP) Annual General Meeting in Buenos Aires; the Arctic Circle Assembly in Reykjavik- highlighting India's Arctic efforts. India also joined the 20th AFoPS Annual Meeting in Shanghai, where Dr. Thamban Meloth was elected Chair of AFoPS for 2025–2027. AFoPS now holds a special invitee status with the US and European Polar Boards.

At the Arctic Science Summit Week 2025 in Boulder, USA, NCPOR, India led discussions on Arctic policy and observational networks and chaired the AFoPS Special Meeting. Additionally, NCPOR scientist also represented India in the Arctic Frontiers Emerging Leaders Program in Norway, gaining valuable insights into Arctic science and leadership.

Glimpse of Antarctic Treaty Consultative Meeting held at Kochi, Kerala, India

Indian scientists at International Polar Meetings and signing of Indo-UAE MoU

2.3 NIPR, Japan 2025

A new national Arctic research initiative, ArCS III (Arctic Challenge for Sustainability III), was officially launched

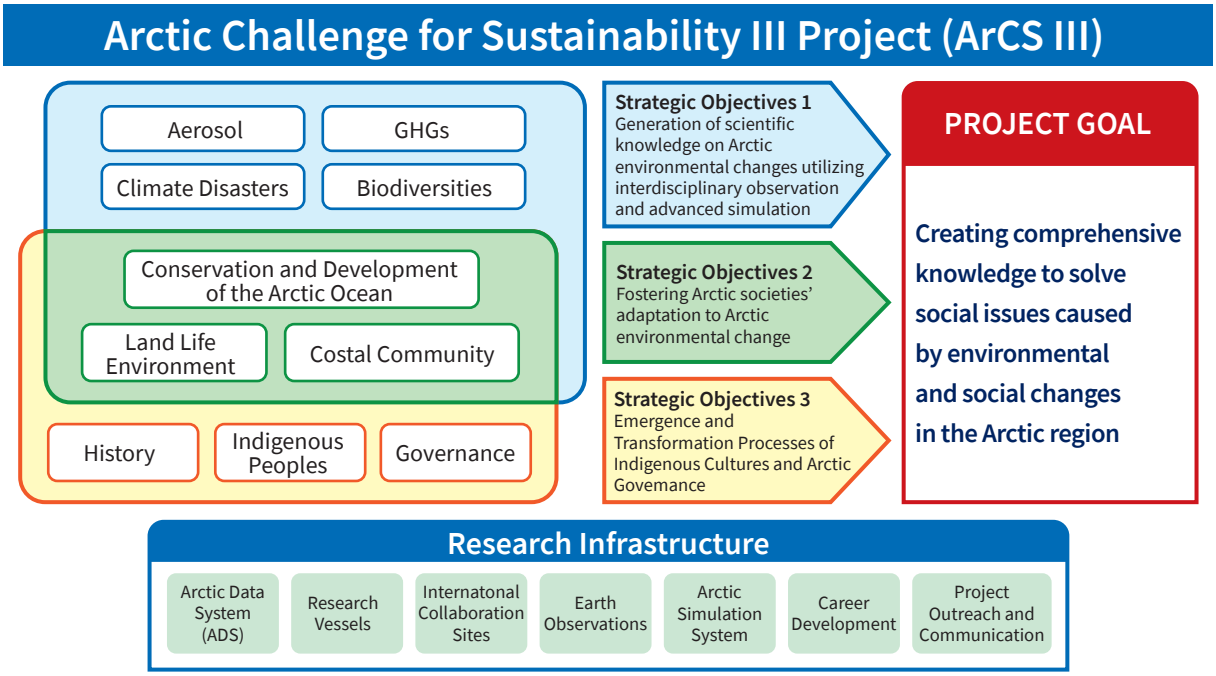
Source link: https://www.nipr.ac.jp/aerc/e/info/20250411.html

Source: National Institute of Polar Research, Japan Agency for Marine-Earth Science and Technology, Hokkaido University

A new national Arctic research initiative, ArCS III (Arctic Challenge for Sustainability III), was officially launched on 1 April 2025. Led by the National Institute of Polar Research (NIPR), the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), and Hokkaido University, the project was selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) to strengthen Japan's Arctic research capabilities. The proposal is led by Professor Hiroyasu Hasumi, and the project will run until March, 2030. It is the largest Arctic research program currently underway in Japan.

ArCS III address rapid environmental changes in Arctic region, where global warming are most pronounced and have global climate and ecosystem effects. The program is of utmost importance to address pressing issues such as improving the reliability of climate predictions, closing observational gaps, and conducting interdisciplinary research to address societal challenges related to the sustainability of the Arctic.

This is a continuation of Japan's Arctic research efforts, which began with the GRENE Arctic Climate Change Research Project in 2011, followed by ArCS and ArCS II.



By leveraging the strengths of Japan's interdisciplinary Arctic research community, the project will promote a deeper understanding of the polar environment. This will be achieved through the use of state-of-the-art observational infrastructure—including research vessels and Earth observation satellites—as well as advanced simulation and data systems. ArCS III will also foster the development of new research areas, train the next generation of researchers, and raise public awareness of Arctic-related societal challenges. By generating comprehensive knowledge that supports solutions to the environmental and social transformations occurring in the Arctic, ArCS III aims to contribute to Japan's international role in both Arctic research and policy.

The academic journal "Polar Science" features Sustainable development in the Arctic for Indigenous peoples

Source link: https://www.nipr.ac.jp/english/info/notice/20250901.html

The National Institute of Polar Research (NIPR) publishes *Polar Science*, a peer-reviewed quarterly journal dealing with polar science, in collaboration with Elsevier B.V. In the latest issue, it features "Sustainable development in the Arctic for Indigenous peoples", published as part of its regular issue (Vol. 44, June 2025). The full text of featured articles will be freely accessible worldwide until 14 January 2026.


Volume 44 June 2025
ISSN 1873-9652
ELSEVIER
ArCSII
Arctic Challenge for Sustainability II
Special Feature:
Sustainable Development in the Arctic for Indigenous Peoples
POLAR SCIENCE
National Institute of Polar Research, Japan
NiPR
Special Feature
Sustainable Development in the Arctic for Indigenous Peoples
Executive Guest Editor: Yuko Osakada

The purpose of the special feature is to identify what efforts are being made for sustainable development in the Arctic and to understand its significance and challenges for Indigenous Peoples. The six high-quality papers featured in this issue are a result of cross-disciplinary research of the Arctic Challenge for Sustainability II (ArCS II) research programs, international law, human society, and coastal environments. They offer a variety of perspectives on the multifaceted efforts to achieve sustainable development in the Arctic.

Sustainable development in the Arctic can be defined as development that improves health, well-being, and security of Arctic communities and residents while conserving ecosystem structures, functions, and resources. “The sustainable development in the Arctic” is a goal, process, and outcome desired by four million Arctic residents, including diverse Indigenous communities. Though Arctic Indigenous peoples constitute approximately 10% of the region’s population, they have been and remain active custodians of this vast territory and its natural resources for millennia”, says Professor Yuko Osakada, Executive Guest Editor of the special feature. “The purpose of the special feature articles is to identify what efforts are being made for sustainable development in the Arctic and to understand its significance and challenges for Indigenous peoples”.

About Polar Science Volume 44 featuring “Sustainable development in the Arctic for Indigenous peoples”

Title: Special feature on “Sustainable development in the Arctic for Indigenous peoples”

Executive Guest Editor: Yuko Osakada (Chuo Law School)

https://www.sciencedirect.com/journal/polar-science/vol/44/suppl/C

KOPRI
Korea Polar Research Institute

2.4 KOPRI, South Korea 2025

Hanwha Ocean Contracts with Ministry of Oceans and Fisheries for Next-generation Icebreaker Research Vessel

AFoPS link: https://afops.org/home/news?id=10154

Source: https://biz.chosun.com/en/en-industry/2025/07/29/WD257CLREZF25CR5BXDXM4QEMM/

The Korean shipbuilder Hanwha Ocean announced on July 29 that it has signed a contract with the Ministry of Oceans and Fisheries to build a next-generation icebreaker research vessel for polar research. The vessel, set to be completed by December 2029, will have a gross tonnage of 16,560 tons, more than double that of Korea's current icebreaker, Araon. It will feature eco-friendly dual-fuel electric propulsion using LNG and will be capable of breaking through 1.5-meter-thick ice in temperatures as low as -45°C. The vessel will also provide high-end comfort for researchers.

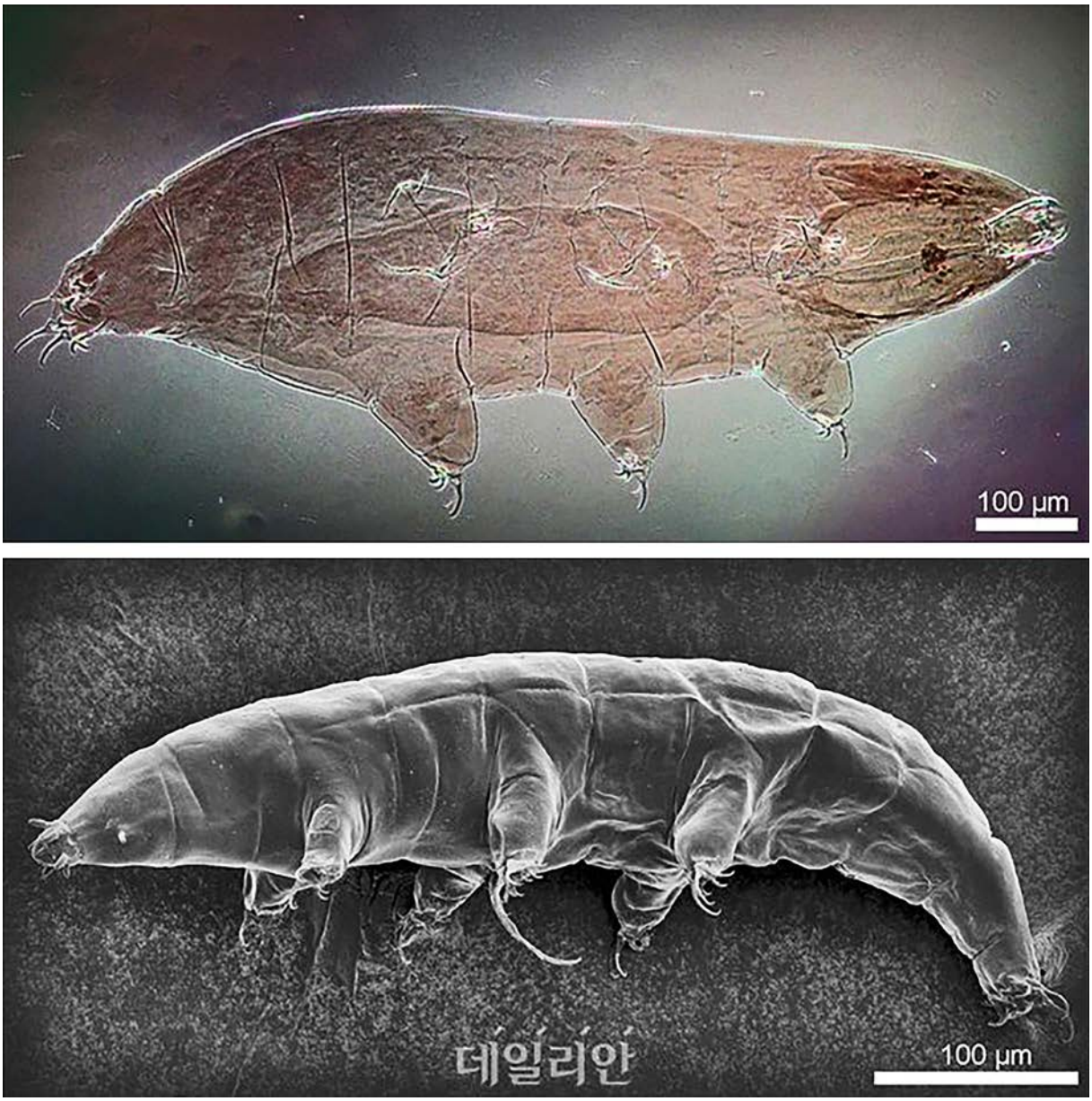
Hanhwa Ocean contract

KOPRI Discovers New Species of Tardigrade in Greenland, Unveiling a Unique "Sensory Organ" for the First Time

AFoPS link: https://afops.org/home/news?id=10153

Source: https://www.dailian.co.kr/news/view/1525933/?sc=Naver

KOPRI announced on July 22 the discovery of a new tardigrade species, Milnesium grandicupula, in Greenland's Arctic region. Discovered by Dr. Tae-yoon Park's team in 2019, this species is notable for its large, cup-shaped mouth and a unique sensory organ — about 1 μm in size — the first of its kind found in any tardigrade. The sensory organ, located at the head, is similar to those found in shrimp and trilobites, offering insights into the evolutionary connection between tardigrades and arthropods. Dr. Jee Hoon Kim, the lead author, emphasized the significance of this discovery for understanding tardigrades' survival strategies and evolutionary history.



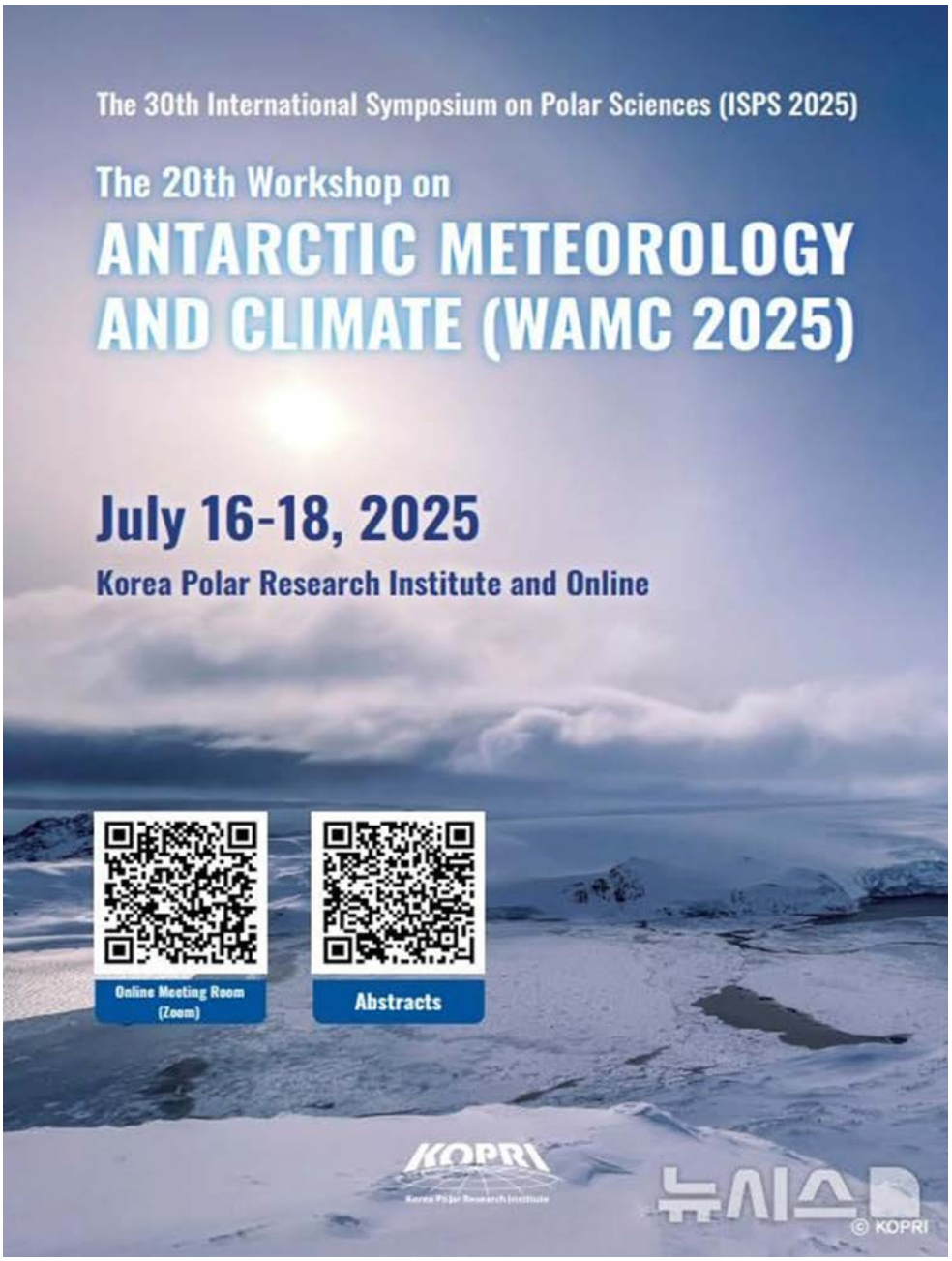
Sensory organ

KOPRI Hosts the 30th International Symposium on Polar Sciences in Incheon

AFoPS link: https://afops.org/home/news?id=10152

Source: https://www.newsis.com/view/NISX20250716_0003253480

KOPRI announced that it hosted the 30th International Symposium on Polar Sciences (ISPS 2025) in Incheon from July 16 to 18. This event, which included "the 20th Antarctic Weather and Climate Workshop (WAMC 2025)", focused on Antarctic climate change, weather observation, and modeling. Over 130 researchers presented on topics such as Antarctic warming, atmospheric circulation, and ice shelf changes. A side event held during this year's ISPS for young scientists featured Dr. Tae Jin Choi, who shared his 30 years of expertise.



30th ISPS

2.5 NARC, Malaysia 2025

Malaysia's science activity in the new Antarctic Research Season

AFoPS link: https://afops.org/home/news?id=10139

Editor: Muhammad Fardy Md IBRAHIM (Sultan Mizan Antarctic Research Foundation, YPASM)

Malaysia marked its 14th participation in the Antarctic Treaty Consultative Meeting (ATCM) in 2025, showcasing a continued commitment since joining the Antarctic Treaty System in 2011. This milestone reflects the nation's growing influence in polar science and diplomacy.

Through annual grant and research support provided by YPASM, two Malaysian scientists have carried out field works in Antarctic at the following facilities during the 2024/2025 summer season as follow:

• Field research through Türkiye facilities in Antarctica; and

• Field research through Polar Research Institute of China (PRIC)

2024/2025 Field Season: Strengthening International Collaboration

During the 2024/2025 summer season, Malaysian scientists carried out research in Antarctica through two strategic collaborations:

(1) Türkiye Antarctic Programme (TAE-IX):

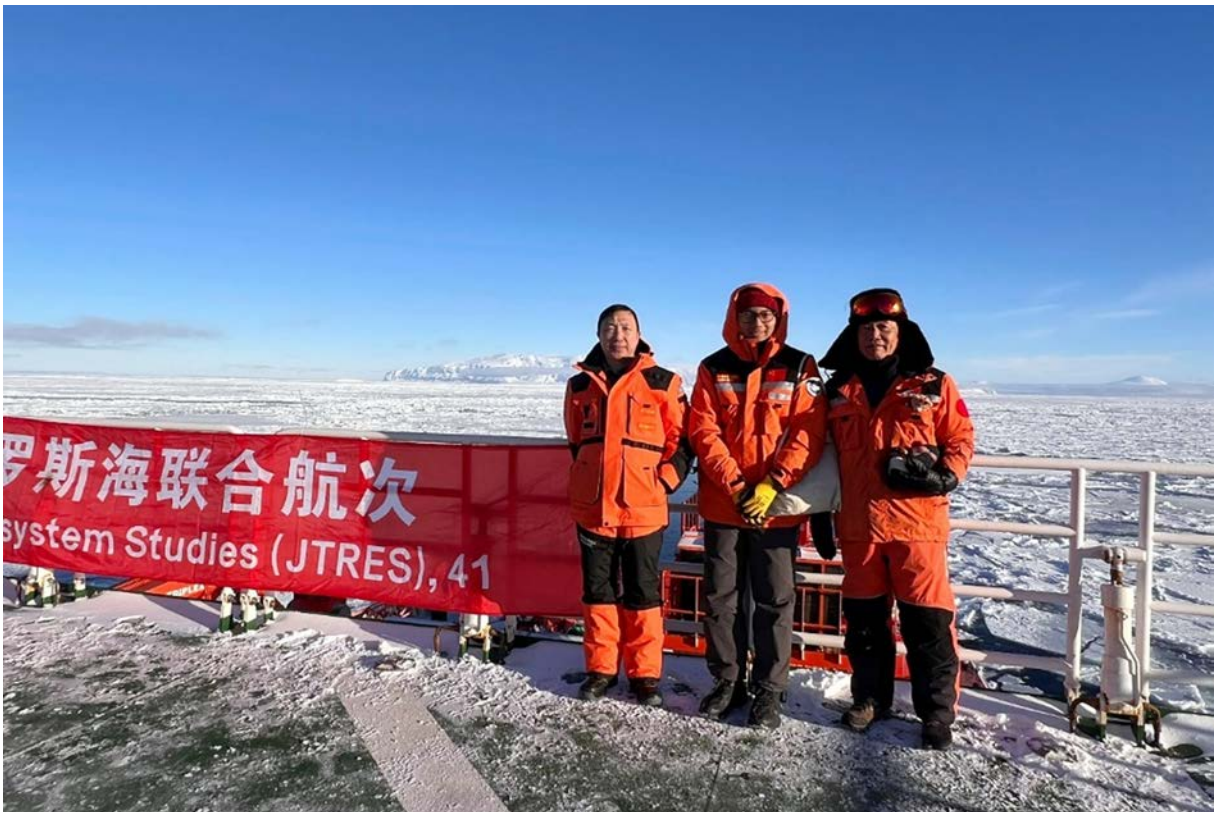
Dr. Tengku Nilam Baizura Binti Tengku Ibrahim conducted research on *Ecotoxicology of Lanthanide Earth Elements in Polar Aquatic Ecosystems* at Türkiye's Horseshoe Island Research Station (8 Feb – 12 Mar 2025), made possible through collaboration with TÜBİTAK MAM Polar Research Institute.

(2) Polar Research Institute of China (PRIC):

Assoc. Prof. Dr. Muhammad Hafiz Borkhanuddin joined the Austral Fall-Winter Cruise (JTRES) to the Ross Sea (18 Mar – 29 Apr 2025), focusing on diversity of endoparasite communities in benthic and pelagic Antarctic zooplankton using integrated analysis techniques.

Malaysia extends its sincere appreciation to both Türkiye and China for enabling these valuable research opportunities.

Dr. Tengku Nilam & Prof. Dr. Burcu Özsoy, Director of TUBITAK MAM, on the Turkiye



Assoc. Prof. Dr. Muhammad Hafiz Borkhanuddin (middle) with Professor Jianfeng He, Cruise leader & chief scientist (left) and Chair Professor Zhou, Deputy Chief Scientist (right) on the *Xuelong 2* observation deck.

Malaysia is fostering the collaborations with international partnerships

AFoPS link: https://afops.org/home/news?id=10138

Editor: Muhammad Fardy Md IBRAHIM (Sultan Mizan Antarctic Research Foundation, YPASM)

To enhance international cooperation in polar research, Malaysia has also pursued the signing of new and renewal of Memorandums of Understanding (MoUs) with various research institutions and universities. These understandings aim to foster collaborative research projects, joint field expeditions, knowledge exchanges and capacity-building initiatives.

(1) Renewal of MoU for 5 years (2024–2029) with British Antarctic Survey.

YPASM and BAS have renewed MoU for another five years, covering the period from 2024 to 2029. The original MoU was first signed in 2015, marking a long-standing partnership in advancing polar research and scientific collaboration between Malaysia and United Kingdom.

(2) New MoU for 5 years (2025–2030) with Technological Research Council of Türkiye (TÜBİTAK).

YPASM and TÜBİTAK signed a new five-year MoU in 2025, marking a new chapter of collaboration in polar research, scientific exchange, and capacity building between Malaysia and Türkiye.

Memorandum of Understanding was exchanged between His Excellency Mehmet Fatih Kacır, Minister of Industry and Technology of the Republic of Türkiye, and Dato' Seri Utama Haji Mohamad bin Haji Hasan, Malaysia's Minister of Foreign Affairs, on behalf of the Ministry of Natural Resources and Environmental Sustainability (NRES), which oversees the Sultan Mizan Antarctic Research Foundation (YPASM)

2.6 PSCT, Thailand 2025

Chinese icebreaker *Xuelong 2* makes historic visit to Thailand

AFoPS link: https://afops.org/home/news?id=10176

Source: https://www.nationthailand.com/news/general/40050188

China's state-of-the-art polar research icebreaker *Xuelong 2* docked at Chuk Samet Pier, Sattahip, marking its first official visit to Thailand. The event honors HRH Princess Maha Chakri Sirindhorn's 70th birthday and the 50th anniversary of Thai–Chinese diplomatic ties. The vessel was also opened for public visits (May 19–23, 2025) and hosted exhibitions, cultural exchanges, and a polar science conference at Chulalongkorn University. Princess Sirindhorn was scheduled to tour the ship on May 20. The visit highlights Thailand's growing role in international polar research and public engagement on climate change and marine science.

TCP group supports icebreaker *Xuelong 2* visit to Thailand; in honor of HRH Princess Maha Chakri Sirindhorn's 70th birthday anniversary and celebrating 50 years of Sino-Thai relations

An international academic conference "*Xuelong 2* and Beyond: Advancing Polar Research and Thailand-China Cooperation in a Changing Climate" held in Thailand

AFoPS link: https://afops.org/home/news?id=10177

Source: https://www.chula.ac.th/en/news/239004/

Chulalongkorn University, together with the Polar Science Consortium of Thailand (PSCT) and the Polar Research Institute of China (PRIC), co-hosted the international symposium "*Xuelong 2 and Beyond: Advancing Polar Research and Thailand–China Cooperation in a Changing Climate*" on May 22, 2025, at Chulalongkorn University. The event, held in honor of HRH Princess Maha Chakri Sirindhorn's 70th birthday and the 50th anniversary of Thailand–China diplomatic relations, brought together more than 200 participants from academia, government, and the public. Discussions highlighted opportunities for joint polar research, climate change studies, and youth engagement in science outreach.

The conference was jointly organized by Chulalongkorn University, the Polar Science Consortium of Thailand (PSCT), and the Polar Research Institute of China (PRIC)

Asian Forum for Polar Sciences Newsletter, 2025

www.afops.org

Secretariat of Asian Forum for Polar Sciences (AFoPS)

Add: Polar Research Institute of China, No. 451 Jinqiao Road, Pudong Shanghai 200136, China
Contact Persons: Ms HAN Yi, Ms ZHANG Sai, **Tel.:** +86 21 50385104, **E-mail:** afops.secretariat@afops.org

Printed in Jan., 2026