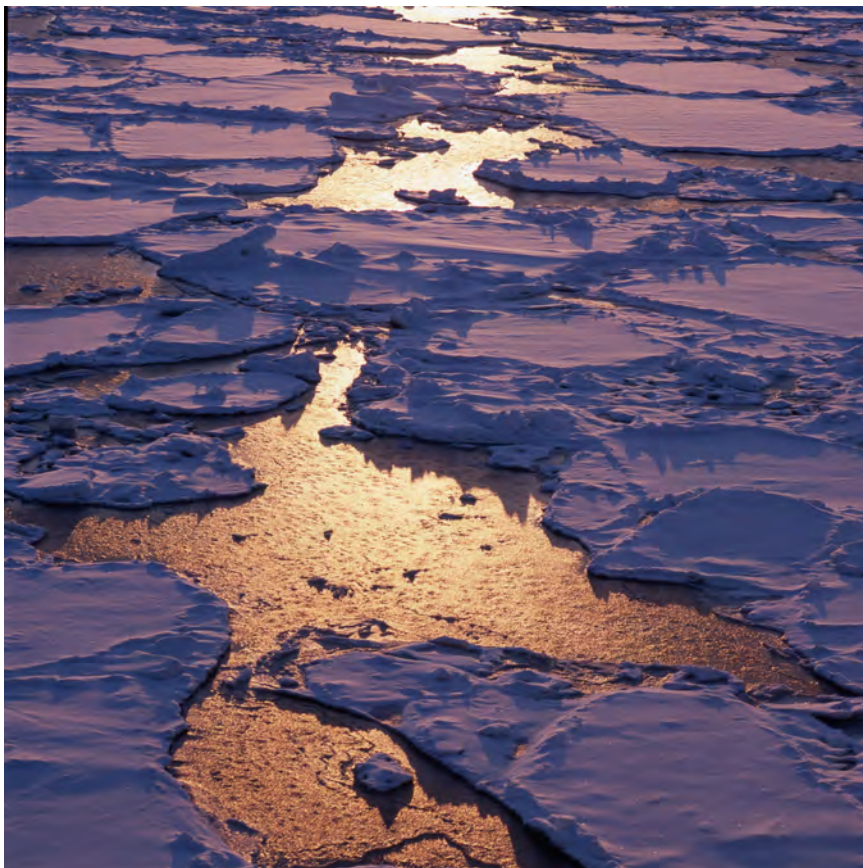


The 39th International Symposium on the Okhotsk Sea & Polar Oceans

English



16-19 February 2025

**Mombetsu Arts & Culture Center, Mombetsu Municipal Museum
Mombetsu Machinaka Art Museum, Mombetsu Citizens' Public Hall
Okhotsk Sea Ice Museum of Hokkaido**

PURPOSE OF SYMPOSIUM

Sea ice covers 10% of the earth's oceans, which produces dynamic cycles in the atmosphere and in the oceans as a major factor in the global heat balance.

The Sea of Okhotsk is the lowest latitude freezing sea in the earth, and the coast of Hokkaido is the southern limit of sea ice in the Northern Hemisphere. Every winter, 60-70% of the Sea of Okhotsk is covered with sea ice, which has both merits and demerits in human lives.

Furthermore, the sea ice extent in the Arctic Ocean has decreased rapidly due to the recent global warming, which is a serious environmental problem. On the other hand, the "Arctic Sea Routes" between the Pacific Ocean and Europe has become important, and the international situation has become a sensitive issue.

For these reasons, sea ice deeply relates to the global environment and also to human activities such as fisheries, agriculture, and industry. Thus, The International Symposium on Okhotsk Sea & Polar Oceans covers varieties of topics of sea ice, global warming, environmental change, ecosystems and fisheries, and many subjects in the Okhotsk region.

This Symposium had been held every year in Mombetsu since 1986 until 2020, but was canceled in 2021 due to the COVID-19 pandemic. However, the academic sessions were held online in 2022, and by a hybrid style in 2023. And at last, in 2024, the Symposium was held in person style again. In addition, Public Programs, Symposium for Children, and Reception were also restarted. We hope that all participants will have fruitful discussions and warm up exchanges. Please enjoy the Symposium!!

Organized by

City of Mombetsu
Symposium Committee

Organized and Sponsored by

Okhotsk Sea and Polar Oceans Research Association (OSPORA)
Arctic Research Center, Hokkaido University (ARC)
National Institute of Polar Research (NIPR)
Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
Institute of Low Temperature Science, Hokkaido University (ILTS)
Kitami Institute of Technology (KIT)
Tokai University, Sapporo Campus
Tokyo University of Agriculture, Faculty of Bioindustry
Tokyo University of Marine Science and Technology
Graduate School of Fisheries Sciences, Hokkaido University
Field Science Center for Northern Biosphere, Hokkaido University
Atmosphere and Ocean Research Institute, The University of Tokyo (AORI)
Hokkaido National Fisheries Research Institute
Japan Consortium for Arctic Environmental Research (JCAR)

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- Shuhei Takahashi, Prof. Emer., Kitami Institute of Technology, Japan
- Kazutaka Tateyama, Kitami Institute of Technology, Japan
- Hajime Yamaguchi, National Institute of Polar Research, Japan

(Alphabetical order)

13:30-14:30 ◇ **Registration** [2F Lobby]

14:30-16:20 ◇ **Opening Ceremony** [Main Hall]

■ **Welcome Address**

Yoshikazu Miyakawa	Mayor, City of Mombetsu
Natsuhiko Otsuka	Chair, The Symposium Committee
Hiroaki Nomura	Director, Okhotsk General Subprefectural Bureau

■ **Introduction of Overseas Participants**

Austria

Mr. Andreas Cziferszky	British Antarctic Survey
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Canada

Dr. Aileen Aseron Espiritu	UiT The Arctic University of Norway
Mr. Félix St-Denis	McGill University

Finland

Prof. Johanna Ikävalko	University of Lapland
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France

Dr. Gaëlle Veyssière	British Antarctic Survey
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Iceland

Prof. Lindsay Arthur	University of Akureyri
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Norway

Prof. Stein Sandven	Nansen Environmental and Remote Sensing Center
Prof. Kjell Stokvik	Nord University

Taiwan

Prof. Hwa Chien	National Central University
Mr. Ya-Fan Chung	National Taiwan University
Dr. Slawomir Jacek Giletycz	National Central University
Prof. Hung-Chu Hsu	National Sun Yat-sen University
Mr. Wei-Tzu Liu	National Central University
Prof. Chuen-Fa Ni	National Central University
Dr. Whyjay Zheng	National Central University

United Kingdom

Mr. Michael Thorne	British Antarctic Survey
Dr. Jeremy Wilkinson	British Antarctic Survey

United States of America

Prof. Hajo Eicken	University of Alaska Fairbanks
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■ **Greetings**

Prof. Johanna Ikävalko	University of Lapland
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- **Attraction:** Dance by Mombetsu Otani Kindergarten
 Unicycle Kids performance
 Mombetsu Elementary School Brass Band

■ **Special Lecture**

(in Japanese language only)

「Adventuring Polar Region」 Yasunaga Ogita, Arctic Adventurer

18:00-19:30 ◇ **Memorial Reception (Banquet)** [3F]

Monday 17 February

Mombetsu Arts & Culture Center

[1F Main Hall]

9:00-9:10 **Opening Address** Natsuhiko Otsuka (Chair of the Symposium Committee)
Explanation of the Aota Masaaki Award

9:10-11:50 **Keynote Address, Session A**

9:10 **A-1** Overview of the Arctic research vessel “MIRAI II”
Eisuke Akane (Japan Agency for Marine-Earth Science and Technology, JAMSTEC)

9:40 **A-2** The Arctic: past, present, and future -Initiatives of the Sasakawa Peace Foundation-
Atsushi Sunami (Sasakawa Peace Foundation)

10:20 **A-3** Ecological interactions between viruses and copepods: A study using continuous ocean
monitoring in the Okhotsk Sea off Mombetsu
Junya Hirai (Atmosphere and Ocean Research Institute, The University of Tokyo)

10:50 **A-4** Grand challenges and opportunities in a rapidly changing Arctic: Perspectives from Alaska
Hajo Eicken, Nancy Fresco (International Arctic Research Center, University of Alaska
Fairbanks, Fairbanks, USA)

11:20 **A-5** Prospects of polar research: Initiatives of the National Institute of Polar Research
Yoshifumi Nogi (National Institute of Polar Research)

13:30-16:40 **Workshop B : Arctic Research Activities and Future Plan by Asian and
Arctic Institutions**

Monday 17 February

Mombetsu Arts & Culture Center

[3F Meeting Room]

13:30-14:30 **Scientific Session C : Sea Ice Region Engineering**

14:40-15:40 **Scientific Session D : Biogeochemistry**

[3F Special Conference Room]

13:30-15:30 **Public Program : Our Home Okhotsk Sea** *(in Japanese language only)*

I. Current conditions and issues of scallop fishery in the Okhotsk Sea
Yasufumi Hada (Abashiri Fish. Res. Inst.)

II. Current programs to conserve salmon populations
Yasuyuki Miyakoshi (Kitami Salmon Enhancement Program Assoc.)

15:50-17:40 **Scientific Session E : Snow, Ice and Human Life**

Monday 17 February

Mombetsu Municipal Museum

13:00-17:50 **Workshop F : Emerging Changes in the Coupled Polar Climate Systems**

Monday 17 February

Mombetsu Municipal Museum

【Entrance Hall】

18:00-19:30 Public Program : Forum for Considering the Global Environment and Nature

An Evening of Learning from Indigenous People and Discovering the Mysteries of Nature

by **OEPN** (Okhotsk Environment Protection Net)

(in Japanese language only)

- I Natural environment of Sakhalin and traditional plant use by indigenous peoples
Mik i Mizushima (Senior Curator Natural History Gr., Res. Div., Hokkaido Museum)
- II Case studies of low-latitude aurora around Mombetsu City
Hiromu Ishihara (Okhotsk Sea Ice Museum of Hokkaido)

Review, Hirokazu Odate (OEPN)

Tuesday 18 February

Mombetsu Arts & Culture Center

【1F Hall】

9:00-11:35 Workshop G : Interactions between the Antarctic Ice Sheet and the Global Climate System

13:00-15:30 Scientific Session H : Meteorology, Climate, and Physical Oceanography

16:00-18:00 Public Program : Consideration of Winter Weather Disasters in the Okhotsk Region
(in Japanese language only)

Considering the Improvement of Disaster Response Capability in the Okhotsk Region
-Learning from the Noto Peninsula Earthquake-

- I Preparing for a major disaster
Hisayoshi Oba (Abashiri Develop. Constr. Dept., Hokkaido Develop. Bu.)
- II How to achieve a health-preserving evacuation
Masahiro Nemoto (Japanese Red Cross Hokkaido College of Nursing)

Panel Discussion "Local Thoughts for Improving Disaster Response Capabilities"

【3F Special Conference Room】

9:00-17:50 Workshop I : The Changing Ice-Covered Ocean and New Utilization

【3F Meeting Room】

9:00-11:55 Workshop J : Review of the Arctic Governance by East-Asian Perspective

15:30-17:45 Workshop K : The Okhotsk Sea: Unique Weather and Climate Generated by the Earth's Cool Spot

Mombetsu Municipal Museum

9:00-10:45 Workshop L : The Dynamics and Roles of Plankton in Boreal Waters

10:55-15:10 Workshop M : Current Status and Future Prospects of Fisheries Industry in Hokkaido, Japan

15:20-18:35 Workshop N : Environmental-Social Changes and Seabirds and Marine Mammals

Tuesday 18 February

《Online Session》

Machinaka Art Museum

15:00-16:40 **Scientific Session O : Online Session**

16:50-18:20 **Workshop P : Doing Things the Right Way: What Role for Japan to Implement the Rights of Indigenous Peoples in the Arctic and Beyond?**

Hotel Okhotsk Palace

19:00~20:30 **Dinner Party for Friendship between Scientists & Volunteers**



Wednesday 19 February

Arts & Culture Center

[1F Hall]

9:00-10:50 **Workshop K : The Okhotsk Sea: Unique Weather and Climate Generated by the Earth's Cool Spot**

11:00-11:30 **Closing Session**

- A Review of the Symposium,
- Prize-awarding Ceremony of the Aota Masaaki Award
- Closing Remarks, Natsuhiko Otsuka (Chair of the Symposium Committee)

(in Japanese language only)

14:00-16:00 **Public Program : Symposium on the Forest-Ocean Linkage**

=Cutting Edge of Forestry=

From the forest in Mombetsu toward the universe

~ development of world's first wooden satellite and new possibilities of wood

Kenji Kariya (Tsukuba, Res. Inst., Sumitomo Forestry Co., Ltd.)

Mombetsu Municipal Museum

(in Japanese language only)

13:30-17:20 **Public Program : The Okhotsk Terroir Symposium 2025 in Mombetsu**

Left message from the Okhotsk People and Culture

~ Examining the Origin of the Okhotsk Culture and Future Potential of Okhotsk Tourism-II ~

Part 1 Reports on the Actual Recirculating Life in the Okhotsk region

Part 2 Possibility of the Okhotsk Region, Perspective from the Outside

Part 3 Free Discussion, -How We Can Utilize Okhotsk Nature and Culture for Further Interaction-

Mombetsu Citizens' Public Hall

13:10-14:30 **Symposium on Sea Ice for Children**

(in Japanese language only)

Chair, Kazuaki Tomiyasu (Board of Education, Mombetsu City Office)

I. Sea ice, the Sea of Okhotsk, and earth's environment"

Natsuhiko Otsuka (Director, Okhotsk Sea Ice Museum of Hokkaido)

II. Listen to the underwater sound of the Arctic"

Evgeniy Podolskiy (Associate Professor, Arctic Research Center, Hokkaido University)

III. Drift Ice Quiz

Monday 17 - Tuesday 19 February

Mombetsu Arts & Culture Center

Observation Equipment Technology Exhibition

[1 F Lobby]



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Monday 17 - Tuesday 18 February

Mombetsu Arts & Culture Center

[3 F Lobby]

Demonstration : Experience of Forecasting Systems with a View to Arctic Observation
- Introduction of Short- and Mid-term Forecasting Techniques -
*by Arctic Sea Ice Information Center, National Institute of Polar Research, **NIPR***

As global warming progresses, temperatures are rising significantly, especially in the Arctic region. Consequently, the summer sea ice extent in the Arctic is decreasing, drawing attention to the use of the Arctic Passage. The Arctic Sea Ice Information Center has been providing mid-term and short-term sea ice forecasts, which are useful for navigating the Arctic Passage and observing the Arctic Ocean, to vessels operating in the Arctic and to the oceanographic research vessel "Mirai" to verify their effectiveness.

The exhibit will present the latest information on these forecasts and the changes in oceans and sea ice, as well as their impacts. Let's think together about the current state of sea ice forecasting and global warming.

Saturday 15 February ~ Sunday 23 March

Okhotsk Sea Ice Museum

Sponsorship Event Okhotsk Photo Exhibition by "Nishi-Mom Photo Club"

9:00	【Opening Session】 Opening Address: Natsuhiko Otsuka (Chair of the Symposium Committee) Explanation of the Aota Masaaki Award	Chair, Seiji Katakura (City of Mombetsu)
9:10	【A:Keynote Address】 A-1 Overview of the Arctic research vessel “MIRAI II” ○Eisuke Akane (JAMSTEC)	Chair, Natsuhiko Otsuka (Okhotsk Sea Ice Museum)
9:40	A-2 The Arctic: past, present, and future -Initiatives of the Sasakawa Peace Foundation- ○Atsushi Sunami (Sasakawa Peace Foundation)	
10:10	Break	
10:20	A-3 Ecological interactions between viruses and copepods: A study using continuous ocean monitoring in the Okhotsk Sea off Mombetsu ○Junya Hirai (Univ. Tokyo)	
10:50	A-4 Grand challenges and opportunities in a rapidly changing Arctic: Perspectives from Alaska ○Hajo Eicken, Nancy Fresco (Univ. Alaska, USA), Go Iwahana (Univ. Alaska, USA/Hokkaido Univ., Japan), Igor Polyakov, Scott Rupp, Erik Schoen (Univ. Alaska, USA), Hisatomo Waga (Univ. Alaska, USA/NIPR, Japan) and Harmony Wayner (Univ. Alaska, USA)	
11:20	A-5 Prospects of polar research: Initiatives of the National Institute of Polar Research ○Yoshifumi Nogi (NIPR)	
11:50	Lunch	
	【B:Workshop, Arctic Research Activities and Future Plan by Asian and Arctic Institutions】	
13:30	Introduction and Chair, Yuji Kodama (Hokkaido Univ.)	
13:35	B-1 From HAI-FES to AANRE -Building a research and education network linking Asia and the Arctic- ○Shotaro Uto and Yuji Kodama (Hokkaido Univ.)	
13:55	B-2 Rapid Arctic change: International Arctic Research Center collaborations ○Hajo Eicken, Nancy Fresco (Univ. Alaska, USA), Go Iwahana (Univ. Alaska, USA/Hokkaido Univ., Japan), Igor Polyakov, Scott Rupp, Erik Schoen (Univ. Alaska, USA), Hisatomo Waga (Univ. Alaska, USA/NIPR, Japan) and Harmony Wayner (Univ. Alaska, USA)	
14:15	B-3 TaiPI: A research and education platform to bridge scientific knowledge and global warming actions ○Chuen-Fa Ni, Hwa Chien, Slawomir Jack Giletycz, Whyjay Zheng, Ping-Yu Chang, Kao-Shen Chung, Pei-Chuan Chuang and Wei-Tzu Liu (Natl. Ctrl. Univ., Taiwan)	
14:35	B-4 Integrating and sustaining Arctic Ocean Observation Systems Hanne Sagen, ○Stein Sandven, Espen Storheim (Nansen Environmental Remote Sensing Ctr. Norway), Matthew Dzieciuch (Univ. California San Diego, USA), Arild Sundfjord, (Norwegian Polar Inst., Norway), Mathilde B. Sørensen (Univ. Bergen, Norway), Jens Abrahamsen, Peter Skagen, (NAXYS TECH, Norway), Bjarte Langeland, Truls Munch-Ellingsen (Stinger AS, Norway), Normen Lochthofen, Thomas Soltwedel (Alfred Wegner Inst. Mar. Polar Res., Germany) and Agnieszka Beszczyńska-Möller (Inst. Oceanology Acad. Sci., Poland)	
14:55	Break	
15:05	B-5 We know the Arctic -Arctic Centre, University of Lapland, Finland ○Johanna Ikävalko (Univ. Lapland, Finland)	
15:25	B-6 TaiPI data repository: a Taiwan-based polar data infrastructure built for open science ○Whyjay Zheng, and Ilham Adi Panuntun (Natl. Ctrl. Univ., Taiwan)	
15:45	B-7 Arctic research at Nord University ○Kjell Stokvik (Nord Univ., Norway)	
16:05	B-8 Advancing Arctic Research: UAV mapping and geological insights in Svalbard and the role of Taiwan's Arctic station in earth sciences ○Slawomir Jacek, Chuen-Fa Ni, Fang-Yi Tsai, Yue-Qi Chaung, Ireneusz Sobota, Kamil Czarniecki, and Chian-Hwa (Natl. Ctrl. Univ., Taiwan)	
16:25	Discussion	

Monday 17 Feb. 2025

Arts & Culture Center, 3F Meeting Room

	【C:Sea Ice Region Engineering】	Chair, Akihisa Konno (Kogakuin Univ.)
13:30	C-1 Consideration of measurement methods for the characteristics of brash ice pieces in ice tank tests ○Keisuke Anzai, Shigeya Mizuno and Yutaka Yamauchi (Technical Res Ctr., Japan Mar. United Corp.)	
13:50	C-2 Examination of ship beset incident by sea ice volume convergence ○Natsuhiko Otsuka (Hokkaido Univ./Sasakawa Peace Foundation)	
14:10	C-3 A Framework and trial calculations of navigability assessment of ships in ice waters ○Shotaro Uto (Hokkaido Univ.) and Natsuhiko Otsuka (Okhotsk Sea Ice Museum)	
14:30	Break	
	【D:Biogeochemistry】	Chair, Takafumi Hirata (Hokkaido Univ.)
14:40	D-1 Geochemical characteristics of particulate iron in the atmosphere and the sea ice in the southern Sea of Okhotsk ○★A Yuta Iwamoto, Aiko Murayama and Jun Nishioka (Hokkaido Univ.)	
15:00	D-2 In situ observation of hyper spectral radiation at the Okhotsk Tower for validation of satellite measurements of ocean color ○Takafumi Hirata (Hokkaido Univ.), Natsuhiko Otsuka (Okhotsk Sea Ice Museum), Katsushi Iwamoto and Seiji Katakura (City of Mombetsu)	
15:20	D-3 Seasonal variations of atmospheric organic aerosols by the continuous year-round measurements at the Okhotsk Tower in Mombetsu ○Yuzo Miyazaki, Eri Tachibana (Hokkaido Univ.), Hitomi Yoshida (Garinko&Tower Co., Ltd.), Zhengyang Fang (Hokkaido Univ.), Katsushi Iwamoto and Seiji Katakura (City of Mombetsu)	
15:40	Break	

Monday 17 Feb. 2025

Arts & Culture Center, 3F Special Conference Room

	【E:Snow, Ice and Human Life】	Chair, Shuhei Takahashi (Kitami Inst. Tech.)
15:50	E-1 How do you feel about the Arctic? Changing emotional representations of the Arctic in English literature from 1500 to the present ○Artem Suslov (Hokkaido Univ.)	
16:10	E-2 Improving winter life in Sapporo: Proposals by Nitobe College graduate students and collaboration with the City of Sapporo ○Marina Lomaeva, Eman H.E. Toulabah, Chinatsu Igarashi, Atsuko Inoue, Emmilce A. Morillas, Taejun Son and Seralathan Dilushi (Hokkaido Univ.)	
16:30	E-3 A comparative study of Arctic and northern indigenous tourism across three sites ○Juha Saunavaara and Takafumi Fukuyama (Hokkaido Univ.)	
16:50	Break	
17:00	E-4 Digital forestry solutions and data-based decision-making: Lessons from Hokkaido and Finland ○Juha Saunavaara (Hokkaido Univ.), Tuomo Puumalainen, Yoshito Shimizu (OY Arbonaut Ltd., Finland) and Ram Avtar (Hokkaido Univ.)	
17:20	E-5 Fluid simulation analysis of “temperature-adjustable bench” in cold regions -Nikko City zero carbon promotion project- ○★A Kouki Toyama, Reo Yamaguchi, Muhammad Najib Roslan, Namie Umezaki, Chinari Watanabe (Utsunomiya Univ.), Abdulgaphur Abdulkhadar Athani (Univ. Tech. Malacca, Malaysia), Mohd Ridha Muhamad (Univ. Malaya, Malaysia), Noriyoshi Yokoo and Kei Horio (Utsunomiya Univ.)	

○★A The Aota Masaaki Award Candidate

【F:Workshop, Emerging Changes in the Coupled Polar Climate Systems】	
13:00	Introduction and Chair, Jun Inoue (NIPR)
13:05	F-1 Analysis of extreme warming events for annual observation at Dome Fuji, inland station of the East Antarctica ○Kyohei Yamada (NIPR), Jun Inoue and Naohiko Hirasawa (NIPR/SOKENDAI)
13:25	F-2 Modeling the supercooled liquid water clouds in the mid-troposphere over the Southern Ocean ○Jun Inoue, Kazutoshi Sato (NIPR/SOKENDAI), Kyohei Yamada (NIPR), Masashi Niwano (Meteorological Res. Inst.), Hitoshi Matsui (Nagoya Univ.), Jan Landwehrs and Annette Rinke (Alfred Wegener Inst., Germany)
13:45	F-3 Causes of the abrupt and sustained 2016-2023 Antarctic sea-ice decline: A sea ice-ocean model study ○Kazuya Kusahara and Hiroaki Tatebe (JAMSTEC)
14:05	Break
	Chair, Kyohei Yamada (NIPR)
14:15	F-4 Predictability of sensor icing caused by supercooled fog in polar ocean operations ○Souichiro Sueyoshi (Nippon Mar. Enterprises, Ltd.)
14:35	F-5 Verification of temperature forecasts by observations during an Arctic cruise of R/V Mirai in November 2018 and analysis of positive error cases around the marginal ice zone ○Akio Yamagami (Ctr. Environmental Sci. Saitama), Takahiro Toyoda (Meteorological Res. Inst.) and Jun Inoue (NIPR)
14:55	F-6 Impact of anthropogenic aerosols on Arctic amplification in a long-term future climate using a climate model ○Jun Ono (NIPR), Manabu Abe, Hiroaki Tatebe and Yoshiki Komuro (JAMSTEC)
15:15	Break
	Chair, Takahiro Toyoda (Meteorological Res. Inst.)
15:25	F-7 Variations of current velocities in the Bering Strait in winter: Influences of local Ekman transport and inter ocean sea level difference detected by surface wind and sea ice velocities ○★A Kohei Hayakawa and Koji Shimada (Tokyo Univ. Mar. Sci. Tech.)
15:45	F-8 Decadal variation in sea ice meltwater amount in the Beaufort Gyre and its relationship with Arctic multi-year ice loss ○★A Y. C. Chen, Vigan Mensah and Kay. I. Ohshima (Hokkaido Univ.)
16:05	F-9 Mechanisms of winter SST variations in the subpolar North Atlantic Ocean: Influences of Arctic sea ice discharge and Gulfstream ○★A Hirotomoto Takahashi and Koji Shimada (Tokyo Univ. Mar. Sci. Tech.)
16:25	Break
	Chair, Kazuya Kusahara (JAMSTEC)
16:35	F-10 Variation mechanism and predictability of early winter sea ice in the Barents and Kara Seas in new Arctic climate regime after 2008 ○★A Kanata Oishi and Koji Shimada (Tokyo Univ. Mar. Sci. Tech.)
16:55	F-11 A variation in the sea ice area in the East Siberian Sea in summer ○★A Rin Harada and Koji Shimada (Tokyo Univ. Mar. Sci. Tech.)
17:15	F-12 Sensitivity of the Arctic sea ice representation to the ice thickness category resolution in an OGCM ○Takahiro Toyoda, L. Shogo Urakawa, Kei Sakamoto, Yuma Kawakami, Kunihiro Aoki, Hideyuki Nakano, Yuhei Takaya, Katsuya Toyama, Naohiro Kosugi, Yoshiteru Kitamura and Masao Ishii (Meteorological Res. Inst.)
17:35	Discussion

【G:Workshop, Interactions between the Antarctic Ice Sheet and the Global Climate System】	
9:00	Introduction and Chair, Shuntaro Hyogo (Hokkaido University)
9:05	G-1 Subglacial lake activities in the Shirase drainage basin, east Antarctica, during 2010-2023 ○Ken Kondo (Nagoya Univ.) and Masahiro Minowa (Hokkaido Univ.)
9:25	G-2 High-resolution estimation of sea-ice melt amount in the Southern Ocean, comparing with the climatology of the ice melt amount ○★A Mizuki Komatsu, Kay I Ohshima (Hokkaido Univ.), Noriaki Kimura (Univ. Tokyo.), Sohey Nihashi (Hokkaido Univ./Natl. Inst. Tech., Tomakomai KOSEN), Masakazu Fujii (NIPR/SOKENDAI), Masashi Machida (Hokkaido Univ.) and Takeshi Tamura (NIPR/SOKENDAI)

<p>【G:Workshop, Interactions between the Antarctic Ice Sheet and the Global Climate System】</p> <p style="text-align: right;">Chair, Shuntaro Hyogo (Hokkaido University)</p>	
9:45	<p>G-3 Development of Weddell Sea regional model</p> <p>○★A Hiroki Moriyoshi (Hokkaido Univ.), Yoshihiro Nakayama (Dartmouth College, USA), Mathias van Caspel, Markus Janout (Alfred Wegener Inst., Germany) and Alena Malyarenko (Univ. Canterbury, New Zealand)</p>
10:05	<p>G-4 Development of the ocean model with improved reproducibility of thermocline and halocline off Totten Glacier, Antarctica</p> <p>○★A Shuntaro Hyogo (Hokkaido Univ.), Yoshihiro Nakayama (Dartmouth College, USA), Masakazu Fujii, Takeshi Tamura (NIPR/SOKENDAI), Ayako Abe-Ouchi (Univ. Tokyo) and Shigeru Aoki (Hokkaido Univ.)</p>
10:25	Break
<p style="text-align: right;">Chair, Keiko Takehara (Hokkaido Univ.)</p>	
10:35	<p>G-5 Impact of wind stress changes on the Antarctic Circumpolar Current -A comparison between 50 km and 5 km resolution models-</p> <p>○★A Shinnosuke Yoshida and Takuro Matsuta (Hokkaido Univ.)</p>
10:55	<p>G-6 Impact of ocean physical conditions on atmospheric CO2 concentration at the last glacial maximum</p> <p>○Miyano Nishida, Akira Oka (Univ. Tokyo.) and Hidetaka Kobayashi (Univ. Toyama),</p>
11:15	<p>G-7 Precipitation isotope variations in inland Antarctica influenced by daily-scale precipitation</p> <p>○★A Kanon Kino, Alexandre Cauquoin (Univ. Tokyo), Atsushi Okazaki (Chiba Univ.), Taikan Oki and Kei Yoshumura (Univ. Tokyo)</p>
11:35	Lunch
<p>【H:Meteorology, Climate, and Physical Oceanography】</p> <p style="text-align: right;">Chair, Akio Yamagami (Ctr. Environmental Sci. Saitama)</p>	
13:00	<p>H-1 Detection of extremely weak precipitation in Rikubetsu, inland Hokkaido, Japan</p> <p>○Naohiko Hirasawa (NIPR/SOKENDAI) and Hiroyuki Konishi (Osaka Kyoiku Univ.)</p>
13:20	<p>H-2 Estimation of visibility from mass flux of snow at weather stations in Hokkaido</p> <p>○Yuji Miki and Youmei Kawamura (Wakkanai Meteorological Office)</p>
13:40	<p>H-3 Ice floe movements around bridge piers during the event of winter-season tsunami run-up into rivers</p> <p>○Takaaki Abe (Civil Engineering Res. Inst. Cold Region) and Yasuhiro Yoshikawa (Kitami Inst. Tech.)</p>
14:00	Break
<p style="text-align: right;">Chair, Jun Ono (NIPR)</p>	
14:10	<p>H-4 Decadal changes of water mass properties in the Bering Sea from 2007 to 2022</p> <p>○Hung-Wei Shu (JAMSTEC/Japan Fish. Res. Educ. Agcy.), Takuya Nakanowatari, Tomohiro Azumaya, Kentaro Honda, Tomoki Sato, Shunpei Sato (Japan Fish. Res. Educ. Agcy.), Hiroaki Tatebe, Shinya Kouketsu (JAMSTEC), Humio Mitsudera (Hokkaido Univ.), Takao Kawasaki (Univ. Tokyo), Yoshihiro Nakayama (Dartmouth College, USA), Sinichiro Kida (Kyushu Univ.), Tomohiro Nakamura (Hokkaido Univ.), Kiyoshi Tanaka (Univ. Tokyo) and Hiroshi Kuroda (Japan Fish. Res. Educ. Agcy.)</p>
14:30	<p>H-5 Unprecedented oceanographic conditions in October 2024 around the Oyashio and Coastal Oyashio off the southeastern coast of Hokkaido, Japan</p> <p>○Hiroshi Kuroda, Yukiko Taniuchi and Takuya Nakanowatari (Japan Fish. Res. Educ. Agcy.)</p>
14:50	<p>H-6 Preliminary drifting buoy observations of the ice-free zone phenomenon in the Gulf of Patience in 2023</p> <p>○Hwa Chien, Li-Ching Lin, An-Shi Wang and Huang-Meng Chang (Natl. Ctrl. Univ., Taiwan)</p>
15:10	<p>H-7 Nonlinear flexural-gravity wave in Arctic Sea</p> <p>○Hung-Chu Hsu and Hung-Yu Huang (Natl. Sun Yat-Sen Univ., Taiwan)</p>
19:00	Dinner Party with Volunteer Groups

[I: Workshop, The Changing Ice-Covered Ocean and New Utilization]	
9:00	Introduction and Chair, Takuji Waseda (Univ. Tokyo)
9:05	I-1 New technology for the simultaneous monitoring of sea ice thickness and overlying snow depth ○Jeremy Wilkinson (British Antarctic Survey, UK), Danny Hills, Rauan Khangerey, Becan Lawless and Liam Marsh (Univ. Manchester, UK)
9:25	I-2 Understanding the impact of predicted changes in sea ice on the under-ice lightscape within the Sea of Okhotsk ○★A Gaëlle Veyssière (British Antarctic Survey/Univ. College London, UK), Daiki Nomura (Hokkaido Univ.), Tomonori Tanikawa (Meteorological Res. Inst.), Takenobu Toyota (Hokkaido Univ.), Takahiro Toyoda (Meteorological Res. Inst.), Hiroyuki Enomoto (NIPR) and Jeremy Wilkinson (British Antarctic Survey, UK)
9:45	I-3 Investigation of a method for extracting deformed ice using machine learning on high-resolution SAR images ○Kentaro Ono and Akihisa Konno (Kogakuin Univ.)
10:05	I-4 A new method for deriving sea ice thickness based on sea ice history using satellite data ○Noriaki Kimura and Hiroyasu Hasumi (Univ. Tokyo.)
10:25	Break
	Chair, Akihisa Konno (Kogakuin Univ.)
10:35	I-5 A Polar Oceans Shipping Information System ○Michael A.S. Thorne (British Antarctic Survey, UK), Franz von Bock und Polach (Hamburg Univ. Tech., Germany), Andreas Cziferszky, Andrew Fleming, Dougal Goodman (British Antarctic Survey, UK), Takashi Kikuchi (JAMSTEC), Tsubasa Kodaira, Kohei Mikami, Hideaki Murayama (Univ. Tokyo), Junji Sawamura (Osaka Univ.), Mikko Suominen (Aalto Univ., Finland), Alex J. Tate (British Antarctic Survey, UK), Jukka Tuhkuri (Osaka Univ.), Peter Wadhams (Univ. Cambridge, UK), Takuji Waseda (Univ. Tokyo) and Jeremy Wilkinson (British Antarctic Survey, UK)
10:55	I-6 Fundamental calculation of ship hull deformation during continuous icebreaking -Structural response in different ice pressure area- ○★A Aoi Genda and Junji Sawamura (Osaka Univ.)
11:15	I-7 Experimental investigation of ship longitudinal response in small ice floes and wave interaction ○Junji Sawamura (Osaka Univ.), Akihisa Konno and Taiki Tokudome (Kogakuin Univ.)
11:35	I-8 Relationship between sea ice thickness and ramming frequency in drift ice and fast ice of Lützow-Holm Bay, East Antarctica ○★A Shotaro Muraoka and Kazutaka Tateyama (Kitami Inst. Tech.)
11:55	I-9 Simulation for icebreaking navigation of icebreaker “Shirase” ○★A Yukihide Ishiyama, Tsubasa Kodaira, Takehiko Nose, Kohei Mikami (Univ. Tokyo), Kazutaka Tateyama (Kitami Inst. Tech.) and Takuji Waseda (Univ. Tokyo)
12:15	Lunch
	Chair, Junji Sawamura (Osaka Univ.)
13:30	I-10 A preliminary calculation of design ice load for offshore wind power generation facility using ice, meteorological and satellite data ○★A Yusuke Kohama, Kazutaka Tateyama (Kitami Inst. Tech.) and Shotaro Uto (Hokkaido Univ.)
13:50	I-11 Numerical method for quantitative evaluation of ice accretion on ship superstructures ○Kentaro Suizu, Akihisa Konno (Kogakuin Univ.) and Toshiro Ozeki (Hokkaido Univ. Educ. Sapporo)
14:10	I-12 Review of the latest ship activity along the Northern Sea Route -Cargo and voyages- ○Natsuhiko Otsuka (Hokkaido Univ./Sasakawa Peace Foundation) and Kjell Stokvik (Ct. High North Logistics, Norway)
14:30	I-13 Operational sea ice information services and Polar View -a UK perspective ○Andreas Cziferszky and Andrew Fleming (British Antarctic Survey, UK)
14:50	I-14 Arctic shipping and global greenhouse gas pricing: A simulation with computational general equilibrium and simple climate model- ○Trang Tran and Ryuichi Shibasaki (Univ. Tokyo)
15:10	I-15 Production of navigation support information in the ice-covered sea using satellite data based on in-situ sea ice observations ○Kazutaka Tateyama (Kitami Inst. Tech.), Akihisa Konno (Kogakuin Univ.), Koh Izumiyama (Hokkaido Univ.), Genki Sagawa (Weathernews) and Motomu Oyama (NIPR)
15:30	Break

Tuesday 18 Feb. 2025

Arts & Culture Center, 3F Special Conference Room

[I: Workshop, The Changing Ice-Covered Ocean and New Utilization]	
	Chair, Kazutaka Tateyama (Kitami Inst. Tech.)
15:40	I-16 Granular approach for continuum modeling of sea ice ○Félix St-Denis, L. Bruno Tremblay (McGill Univ., Canada), Damien Ringeisen, Jean-François Lemieux and Mathieu Plante (Environment and Climate Change Canada, Canada)
16:00	I-17 Material point method for modelling sea ice movement and breakup -MPM modelling of sea ice dynamics- ○Igor Gribanov and Takuji Waseda (Univ. Tokyo)
16:20	I-18 Wind wave and swell evolution in the ice-covered southern Sea of Okhotsk under explosive cyclogenesis ○Takehiko Nose, Takuji Waseda, Tsubasa Kodaira (Univ. Tokyo), Yasushi Fujiwara (Kobe Univ.) and Takenobu Toyota (Hokkaido Univ.)
16:40	I-19 2024 mid-term Arctic Sea ice forecast: comparison with observations ○Motomu Oyama (NIPR), Noriaki Kimura (Univ. Tokyo.) and Hironori Yabuki (NIPR)
17:00	I-20 Wave dissipation and spectral downshifting in ice: Experimental and numerical study with the Nonlinear Schrödinger Equation ○★A Koya Sato (Univ. Tokyo), Takuji Waseda (Univ. Tokyo/JAMSTEC) and Tsubasa Kodaira (Univ. Tokyo)
17:20	I-21 Short-term sea ice forecast for the whole Arctic Ocean using ice-ocean coupling model ○Yoshihiro Niwa, Motomu Oyama, Takeshi Sugimura and Hironori Yabuki (NIPR)
17:40	Discussion
19:00	Dinner Party with Volunteer Groups

Tuesday 18 Feb. 2025

Arts & Culture Center, 3F Meeting Room

[J: Workshop, Review of the Arctic Governance by East-Asian Perspective]	
9:00	Introduction and Chair, Xiang Gao (Sasakawa Peace Foundation)
9:05	J-1 Review of Japan's ocean policy: Toward the 5th basic plan on ocean policy ○Yuta Komori (Sasakawa Peace Foundation/Meiji Univ.)
9:25	J-2 Japan's Arctic policy: Current status and challenges ○Sakiko Hataya (Sasakawa Peace Foundation)
9:45	J-3 From the JCAR long-term plan to ICARP IV and IPY5, Japan's potential for future polar research ○Hiroyuki Enomoto (NIPR)
10:05	J-4 Review of Russia's Northern Sea Route Regulation ○Natsuhiko Otsuka (Hokkaido Univ./Sasakawa Peace Foundation)
10:25	J-5 The role of epistemic community on Arctic governance ○Xiang Gao (Sasakawa Peace Foundation)
10:45	Break
10:55	J-6 Seventy years of Arctic discourses in Japan's national diet: From reactive to proactive engagement Fujio Ohnishi and ○Artem Suslov (Hokkaido Univ.)
11:15	J-7 Science meets policy: The precautionary principle in the Central Arctic Ocean Fisheries Agreement ○Aileen Aseron Espiritu (UiT Arctic Univ. Norway, Norway)
11:35	J-8 Russia's international Arctic policy after the invasion of Ukraine: Experts' voices in the domestic media ○Marina Lomaeva and Natalya Shmakova (Hokkaido Univ.)
11:55	Lunch
[K: Workshop, The Okhotsk Sea: Unique Weather and Climate Generated by the Earth's Cool Spot]	
15:30	Introduction and Chair, Meiji Honda (Nigata Univ.)
15:35	K-1 Drift ice along the Sea of Okhotsk coast of Hokkaido during the IGY (1957-58) ○Shuheï Takahashi (Okhotsk Sea Ice Museum), Atsumu Omura (Swiss Federal Inst. Tech., ETH, Switzerland) and Natsuhiko Otsuka (Okhotsk Sea Ice Museum)
15:55	K-2 Large-scale dynamics shaping the Aleutian Low ○★A Keisuke Morimoto (Univ. Tsukuba), Masaya Kuramochi (Japan Meteorological Agcy.) and Hiroaki Ueda (Univ. Tsukuba)
16:15	K-3 Influence of cut-off lows on quasi-stationary convective bands occurred in the Tohoku region ○★A Tomonari Tsumori, Meiji Honda and Naoya Takahashi (Nigata Univ.)
16:35	Break

Tuesday 18 Feb. 2025

Arts & Culture Center, 3F Meeting Room

	【K:Workshop, The Okhotsk Sea: Unique Weather and Climate Generated by the Earth's Cool Spot】 Chair, Meiji Honda (Nigata Univ.)
16:45	K-4 Long-term variations of temperature, salinity and volume transport in the Soya Warm Current and their relationships with the Japan Sea ○★A Mariko Honda, Kay I. Ohshima and Vigan Mensah (Hokkaido Univ.)
17:05	K-5 Weather records and climatic changes in northern Japan in the 1840s-50s ○Yoshio Tagami (Univ. Toyama) and Gaston Demarée (Royal Meteorological Inst. Belgium, Belgium)
17:25	K-6 Sea ice records over more than a century at an observatory facing the Okhotsk coast of Hokkaido, Japan ○Takahiro Toyoda (Meteorological Res. Inst.), Kento Tsukagawa (Abashiri Local Meteorological Office), Yusuke Kimura, Honoka Abe, Meiji Honda (Niigata Univ.), Yuki Yamada, Miku Amano, Yoshihiro Tachibana (Mie Univ.), Yuka Sawa, Keisuke Morimoto, Hiroaki Ueda (Univ. Tsukuba), Katsushi Iwamoto (City of Mombetsu), Kimihiro Itoh (Sapporo Regional Headquarters), Fumitake Shido (Wakkanai Local Meteorological Office), Hitoshi Tada, (Abashiri Local Meteorological Office), Hideki Kaneko (Fukui Local Meteorological Office), Katsuya Toyama, Naohiro Kosugi, Yusuke Ushijima and Masao Ishii (Meteorological Res. Inst.)
19:00	Dinner Party with Volunteer Groups

Tuesday 18 Feb. 2025

Mombetsu Municipal Museum

	【L:Workshop, The Dynamics and Roles of Plankton in Boreal Waters】
9:00	Introduction and Chair, Junya Hirai (The University of Tokyo.)
9:05	L-1 Seasonal variation of diel vertical migration of zooplankton in the Soya Warm Current region observed by ADCP backscatter ○Mizuki Kuga, Atsushi Yamaguchi, Matsuno Kohei and Kay I. Ohshima (Hokkaido Univ.)
9:25	L-2 Seasonal and interannual changes in zooplankton communities and size spectra at Mombetsu Port, Hokkaido in 2014 and 2021 ○★A Shuo Wang, Tsubasa Suga (Hokkaido Univ.), Hideaki Fujiya, Masaki Iwabuchi (Econix Co. Ltd.), Hiromi Kasai (Japan Fish. Res. Educ. Agcy.), Seiji Katakura (City of Mombetsu) and Atsushi Yamaguchi (Hokkaido Univ.)
9:45	L-3 Annual variability of size and bulk density of planktic foraminiferal tests in the western North Pacific ○Katsunori Kimoto and Rika Horiuchi (JAMSTEC)
10:05	L-4 Comparative analysis of eDNA-based taxonomic assignment in micro eukaryotes from Mombetsu using different databases ○Satoshi Nagai (Japan Fish. Res. Educ. Agcy.), Noriko Nishi (Axiohelix) Junya Hirai (Univ. Tokyo.) and Seiji Katakura (City of Mombetsu)
10:25	L-5 Revealing hidden diversity of zooplankton under sea ice in the Okhotsk Sea ○Junya Hirai (Univ. Tokyo.), Atsushi Yamaguchi (Hokkaido Univ.) and Seiji Katakura (City of Mombetsu)
10:45	Break
	【M:Workshop, Current Status and Future Prospects of Fisheries Industry in Hokkaido, Japan】
10:55	Introduction and Chair, Makoto Hatakeyama (Abashiri Fish. Res. Inst.)
11:00	M-1 Current status of salmon fishery ○Hayato Saneyoshi (Salmon Freshwater Fish. Res. Inst.)
11:20	M-2 Economic seaweed in Hokkaido: Focusing on seaweed from Mombetsu ○★A Takahiro Arai (Wakkanai Fish. Res. Inst.)
11:40	M-3 Tracking Japanese neon flying squid vessels in the central North Pacific using Automatic Identification System (AIS) data ○★A Shintaro Ohno (Abashiri Fish. Res. Inst./Hokkaido Univ.), Hiroto Abe (Hokkaido Univ.), Hiromichi Igarashi (JAMSTEC) and Sei-Ichi Saitoh (Hokkaido Univ.)
12:00	M-4 Time-lapse videos reveal the unique behavioral patterns of Starfish ○★A Chitose Yamazaki (Abashiri Fish. Res. Inst.)
12:20	Lunch

	【M:Workshop, Current Status and Future Prospects of Fisheries Industry in Hokkaido, Japan】 Chair, Makoto Hatakeyama (Abashiri Fish. Res. Inst.)
13:30	M-5 The role of Hokkaido and its fisheries associations in Japan-Russia fisheries relations ○Marina Lomaeva (Hokkaido Univ.) and Tatsuo Nakajima (Hokkaido Government)
13:50	M-6 The relationship between stock of Hokkai Shrimp (<i>padalus latirostris</i>) in Lake Saroma and prohibition on fishing since 2017 to 2023 ○Hiroya Okumura (Abashiri Fish. Res. Inst.), Nobuyuki Tanaka (Wakkanai Fish. Res. Inst.) and Takashi Ohashi (Yubetsu Fish. Coop.)
14:10	M-7 Sea cucumber aquaculture: current situation and new perspectives -New insights from sea cucumber aquaculture research in Hokkaido- ○Nobukazu Sato (Wakkanai Fish. Res. Inst.)
14:30	M-8 Bio-optical properties of salmon driftnet fishing sites inferred from field observation and satellite-derived ocean color data ○★A Yuki Iino, Tomoki Sato, Hayato Koyakumaru and Shunpei Sato (Japan Fish. Res. Educ. Agcy.)
14:50	M-9 Bioeconomic trade-offs of future redistribution of fisheries resources in the Eastern Bering and Chukchi Seas ○Irene D. Alabia, Jorge Garcia Molinos, Takafumi Hirata (Hokkaido Univ.), Daiju Narita (Univ. Tokyo) and Toru Hirawake (NIPR/SOKENDAI)
15:10	Break
	【N:Workshop, Environmental-Social Changes and Seabirds and Marine Mammals】
15:20	Introduction and Chair, Yoko Mitani (Kyoto University)
15:25	N-1 Evolution of marine mammal conservation and management, and the role of substate and non-state actors : The case of the North Pacific and Japan ○Marina Lomaeva (Hokkaido Univ.) and Yoko Mitani (Kyoto Univ.)
15:45	N-2 Collaborative study with Inuit on the foraging ecology of marine mammals in the Arctic ○★A Monica Ogawa (Hokkaido Univ.), Aqqalu Rosing-Asvid, Sascha Schiøtt (Greenland Inst. Natl. Resources, Greenland), Caroline Bouchard (Greenland Inst. Natl. Resources, Greenland/Univ. Laval, Canada), Yuta Sakuragi (Hokkaido Univ.), Evgeny Podolskiy, Shin Sugiyama (Hokkaido Univ.) and Yoko Mitani (Kyoto Univ.)
16:05	N-3 Underwater sounds of Arctic animals ○Evgeny A. Podolskiy, Mayuko Otsuki, Monica Ogawa, Kohei Hasegawa and Shin Sugiyama (Hokkaido Univ.)
16:25	N-4 Post-release behaviors and movements of juvenile spotted seals (<i>Phoca largha</i>) rehabilitated at the Okhotsk Tokkari Center: Insights from satellite tracking- ○★A Heping Li (Kyoto Univ.), Kay I Ohshima (Hokkaido Univ.), Masako Okazaki (Okhotsk Tokkari Ctr.) and Yoko Mitani (Kyoto Univ.)
16:45	N-5 First track of Baird's beaked whales in the southern Sea of Okhotsk from autumn to winter ○Hiroko Sasaki, Hikari Maeda, Yu Kanaji (Fish. Resources Inst., Japan Fish. Res. Educ. Agcy.), Mari Kobayashi (Tokyo Univ. Agriculture/Mar. Wildlife Ctr. Japan), Shun Ikuta (Mar. Wildlife Ctr. Japan) and Kenji Konishi (Inst. Cetacean Res.)
17:05	N-6 Was offshore Hokkaido used as one of the refugia for killer whales (<i>Orcinus orca</i>) during the last glacial maximum? ○★A Momoka Suzuki (Kyoto Univ.), Mami Kawai, Takashi Hayakawa (Hokkaido Univ.), Yuki F. Kita (Tokai Univ.), Motoi Yoshioka (Mie Univ.), Hiroshi Ohizumi (Tokai Univ.), Fumio Nakahara (Tokiwa Univ.), Shigeo Saino (Kobe Animals-and-Plants Environmental Col.), Tadasu K. Yamada, Yuko Tajima, Akira Shiozaki (Natl. Museum Nature Sci.), Shimpei F. Hiruta (Showa Univ.), Shin Nishida (Univ. Miyazaki), Masao Amano (Nagasaki Univ.), Yoshikazu Uni (Tokyo Univ. Agriculture), Ayaka T. Matsuda, Takashi F. Matsuishi (Hokkaido Univ.), Miho Murayama, Yu Sato and Yoko Mitani (Kyoto Univ.)
17:25	Break
17:35	N-7 Ingestion of plastics by little auks in northwestern Greenland across sea-ice conditions ○★A Hinata Kawamori, Mayuko Otsuki, Ryo Kusaka, Shin Sugiyama and Jean-Baptiste Thiebot (Hokkaido Univ.)
17:55	N-8 Winter bird monitoring using a camera at the Okhotsk Tower in Mombetsu ○Toru Takeuchi, Yukinori Nakane, Shinichi Sakai (Ctrl. Res. Inst. Electric Power Indus.), Yuta Urabe (Okhotsk Garinko Tower Co., Ltd.), Katsushi Iwamoto and Seiji Katakura (City of Mombetsu)
18:15	N-9 Movement of juvenile black-eared kites after fledgling ○Kei Matsumoto (Kitami Inst. Tech.)
19:00	Dinner Party with Volunteer Groups

	【O:Online Session】 Chair, Yuji Kodama (Hokkaido Univ.) and Artem Suslov (Hokkaido Univ.)
15:00	O-1 About remote monitoring opportunities for natural disaster forecasting ○Ferdenant Mkrtychyan (Kotelnikov IRE, RAS Fryazino Branch, Russia)
15:20	O-2 Impact of wind on tides in the Kuril Straits ○Vsevolod Ilin (Lomonosov Moscow State Univ./Shirshov Inst. Oceanology, Russia) and Victor Arkhipkin (Lomonosov Moscow State Univ., Russia)
15:40	O-3 Investigation of co-oscillating and independent tides in the Sea of Japan ○Vsevolod Ilin (Lomonosov Moscow State Univ./Shirshov Inst. Oceanology, Russia), Victor Arkhipkin (Lomonosov Moscow State Univ., Russia) and Igor Medvedev (Shirshov Inst. Oceanology, Russia)
16:00	O-4 Environmental safety and development of environmentally sustainable shipping along the Northern Sea Route Olga Konovalova, Alexander Shestakov, Vladislav Kalenichenko, Alexey Skorina, Sergey Kirillov, ○Anita Dkhar and Nikolay Shabalin (Mar. Res. Ctr., Lomonosov Moscow State Univ., Russia)
16:20	O-5 Numerical modeling of iceberg-generated tsunami ○Yi-Xuan Huang, Tso-Ren Wu, Pi-Chun Huang and Shu-Kun Hsu (Natl. Ctrl. Univ., Taiwan)
16:40	Break
	【P:Workshop, Doing Things the Right Way: What Role for Japan to Implement the Rights of Indigenous Peoples in the Arctic and Beyond?】
16:50	Introduction and Chair, Lindsay Arthur (Univ. Akureyri, Iceland)
17:00	P-1 Attempts of strengthening indigenous engagement in Japanese Arctic Research Projects ○Hiroyuki Enomoto (NIPR)
17:20	P-2 Indigenous knowledge under the UNFCCC (IPCC) and CBD (IPBES) and possible contribution by the Ainu ○Hitomi Kimura (Otsuma Women's Univ.)
17:40	P-3 The implementation of the Central Arctic Ocean Fisheries Agreement (CAOFA) and Arctic indigenous peoples ○Osamu Inagaki (Kobe Univ.)
18:00	P-4 The Arctic normative order? Roles and responsibilities of non-Arctic states in promoting indigenous rights globally ○Romain Chuffart (Univ. Akureyri, Iceland)
19:00	Dinner Party with Volunteer Groups

	【K:Workshop, The Okhotsk Sea: Unique Weather and Climate Generated by the Earth's Cool Spot】 Chair, Takahiro Toyoda (Meteorological Res. Inst.)
9:00	K-7 Sea ice conditions in the Sea of Okhotsk in the 2023/2024 winter season ○Misa Komuro, Yoshikazu Fukuda, Keiji Hamada and Yuji Akasaka (Japan Meteorological Agcy.)
9:20	K-8 Relationship between snowfall in Niigata City and sea ice in the Okhotsk Sea ○Honoka Abe, Meiji Honda and Naoya Takahashi (Nigata Univ.)
9:40	K-9 Atmospheric characteristics associated with plain-type snowfall in Niigata Prefecture ○Yusuke Kimura, Meiji Honda and Naoya Takahashi (Nigata Univ.)
10:00	K-10 The influence of the Okhotsk high on widespread and long-lasting heavy rainfall ○Yuki Yamada, Yoshihiro Tachibana and Satoru Kasuga (Mie Univ.)
10:20	K-11 Influence of the Okhotsk Sea on weather and climate in Japan ○Meiji Honda (Nigata Univ.), Yoshihiro Tachibana (Mie Univ.), Takahiro Toyoda (Meteorological Res. Inst.) and Hiroaki Ueda (Univ. Tsukuba)
10:40	Discussion
10:50	Break
11:00	【Closing Session】 Chair, Seiji Katakura (City of Mombetsu) •A Review of the Symposium, •Prize-awarding Ceremony of the Aota Masaaki Award •Closing Remarks, Natsuhiko Otsuka (Chair of the Symposium Committee)

Exhibition**Arts & Culture Center, 3F Lobby****【Extra】****Ex-1** Johann August Miertsching and his circum-continental travel as Inuit language interpreter on board H.M.S. *Investigator*

Gaston R. Demarée (Royal Meteorological Inst. Belgium, Belgium), Yoshio Tagami (Univ. Toyama) and Astrid E. J. Ogilvie (Stefansson Arctic Inst., Iceland/ Univ. Colorado, USA)

Ex-2 Symphony of the ENSO -Correlations between sea level pressure and sea surface temperature- Takao Nakajin (Tokai Univ.)**Ex-3** Scallop catch statistics for 126 years -Fishing and fish-processing industrie, economics Masaya Yamada (Hokkaido Indus. Archaeology Soc./Hokkaido Cultural Prop. Protection Assoc.)**Monday 17 - Tuesday 18 Feb. 2025****Arts & Culture Center, 3F Lobby**9:00 | **【Demonstration】**

17:00

**Experience of Forecasting Systems with a View to Arctic Observation
- Introduction of Short- and Mid-term Forecasting Techniques -***by Arctic Sea Ice Information Center, National Institute of Polar Research, **NIPR***

As global warming progresses, temperatures are rising significantly, especially in the Arctic region. Consequently, the summer sea ice extent in the Arctic is decreasing, drawing attention to the use of the Arctic Passage. The Arctic Sea Ice Information Center has been providing mid-term and short-term sea ice forecasts, which are useful for navigating the Arctic Passage and observing the Arctic Ocean, to vessels operating in the Arctic and to the oceanographic research vessel "Mirai" to verify their effectiveness.

The exhibit will present the latest information on these forecasts and the changes in oceans and sea ice, as well as their impacts. Let's think together about the current state of sea ice forecasting and global warming.

■Public Program**Monday 17 Feb. 2025****Arts & Culture Center, 3F Special Conference Room**13:30 | **【Public Program, Our Home Okhotsk Sea】***(in Japanese language only)*

15:30

I Current conditions and issues of scallop fishery in the Okhotsk Sea
Yasufumi Hada (Abashiri Fish. Res. Inst.)II Current programs to conserve salmon populations
Yasuyuki Miyakoshi (Kitami Salmon Enhancement Program Assoc.)**Monday 17 Feb. 2025****Mombetsu Municipal Museum, Entrance Hall**18:00 | **【Public Program, Forum for Considering the Global Environment and Nature】**

19:30

An Evening of Learning from Indigenous People and Discovering the Mysteries of Nature
Chair, Tomoya Ishi (OEPN) *(in Japanese language only)*I Natural environment of Sakhalin and traditional plant use by indigenous peoples
Miki Mizushima (Senior Curator Natural History Gr., Res. Div., Hokkaido Museum)II Case studies of low-latitude aurora around Mombetsu City
Hiromu Ishihara (Okhotsk Sea Ice Museum of Hokkaido)

Review, Hirokazu Odate (Okhotsk Environment Protection Net, OEPN)

Monday 18 Feb. 2025

Mombetsu Municipal Museum

	【Public Program, Consideration of Winter Weather Disasters in the Okhotsk Region】 Considering the Improvement of Disaster Response Capability in the Okhotsk Region -Learning from the Noto Peninsula Earthquake- <i>(in Japanese language only)</i> Chair, Shuji Mori (Abashiri Develop. Constr. Dept., Hokkaido Develop. Bu.)
16:00	Introduction, Otsuka Natsuhiko (Okhotsk Sea Ice Museum of Hokkaido/Symposium Committee)
16:05	I Preparing for a major disaster Hisayoshi Oba (Abashiri Develop. Constr. Dept., Hokkaido Develop. Bu.)
16:15	II How to achieve a health-preserving evacuation Masahiro Nemoto (Japanese Red Cross Hokkaido College of Nursing)
16:55	Break
17:05	Panel Discussion “Local Thoughts for Improving Disaster Response Capabilities” Coordinator, Masahiro Nemoto (Japan Red Cross Hokkaido College of Nursing) [Panelists] Kenzo Kasai (Abashiri Local Meteorological Observatory, Japan Meteorological Agency) Daisuke Kubo (Shokotsu Junior High School, City of Mombetsu) Yuko Kinoshita (Mombetsu City Social Welfare Council) Ryo Hamada (Hokkaido Okhotsk General Promotion Bu.) Makoto Ishikawa (City of Mombetsu) Review, Masahiro Nemoto (Japan Red Cross Hokkaido College of Nursing)
18:00	Closing Remarks, Takehiko Suzuki (Abashiri Develop. Constr. Dept., Hokkaido Develop. Bu.)

Wednesday 19 Feb. 2025

Arts & Culture Center, 1F Hall

14:00	【Public Program, Symposium on the Forest-Ocean Linkage】 <i>(in Japanese language only)</i> =Cutting Edge of Forestry=
16:00	Introduction, Masatoshi Nakamura (City of Mombetsu) From the forest in Mombetsu toward the universe ~ development of world's first wooden satellite and new possibilities of wood Kenji Kariya (Tsukuba, Res. Inst., Sumitomo Forestry Co., Ltd.)

Wednesday 19 Feb. 2025

Mombetsu Municipal Museum

13:30	【Public Program, The Okhotsk Terroir Symposium 2025 in Mombetsu】 <i>(in Japanese language only)</i>
17:20	Left message from the Okhotsk People and Culture ~ Examining the Origin of the Okhotsk Culture and Future Potential of Okhotsk Tourism-II ~ Part 1 Reports on the Actual Recirculating Life in the Okhotsk region Part 2 Possibility of the Okhotsk Region, Perspective from the Outside Part 3 Free Discussion, -How We Can Utilize Okhotsk Nature and Culture for Further Interaction-

Wednesday 19 Feb. 2025

Mombetsu Citizens' Public Hall

13:10	【Symposium on Sea Ice for Children】 <i>(in Japanese language only)</i> Chair, Kazuaki Tomiyasu (Board of Education, Mombetsu City Office)
14:30	I. Sea ice, the Sea of Okhotsk, and earth's environment” Natsuhiko Otsuka (Director, Okhotsk Sea Ice Museum of Hokkaido) II. Listen to the underwater sound of the Arctic” Evgeniy Podolskiy (Associate Professor, Arctic Research Center, Hokkaido University)

Saturday 15 Feb.- Sunday 23 Mar.

Okhotsk Sea Ice Museum

	【Public Program, Poster Exhibition】 Okhotsk Photo Exhibition by "Nishi-Mom Photo Club"
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All Photos by Noriaki Kimura

Organized and Sponsored by

Okhotsk Sea and Polar Oceans Research Association (OSPORA)
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National Institute of Marine Research (NIPR)
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