



Japan's Update to FARO 2025 on Arctic Science Activities

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<< Project Goal >>

Promoting advanced and interdisciplinary research on the Arctic, aiming social implement of its results.

4 Strategic Goals

2 Priority Subjects

Strategic Goal ①



Advanced
Observation of
Arctic
Environmental
Change

Strategic Goal ②



Improvement of
Weather and
Climate
Prediction

Strategic Goal ③



Impact of Arctic
Environmental
Change on
Society

Strategic Goal ④



Legal/Policy
Response and
Research
Implementation for
a Sustainable Arctic

Priority Subject ①



Capacity
Building and
Research
Promotion

Priority Subject ②



Strategic
Dissemination of
Arctic
Information



Atmosphere

Ocean

Cryosphere

Land



Teleconnection

Climate Prediction



Human Society

Arctic Sea Routes

Coastal Environments



International Law

International Relations

11 Research Programs

- >360 Researchers
participating from
57 University/institute
- 5-year Total budget
>4.7 Billion Yen
(28 MEUR)

Research
Infrastructures

International
Collaboration Site

Research Vessel

Earth Observation
Satellite Data

Arctic Data archive System

Arctic Challenge for Sustainability II 2020-2025 Report

[Summary]

Summary is available from

<https://www.nipr.ac.jp/arcs2/e/achievement/arcs2-report-summary-en.pdf>

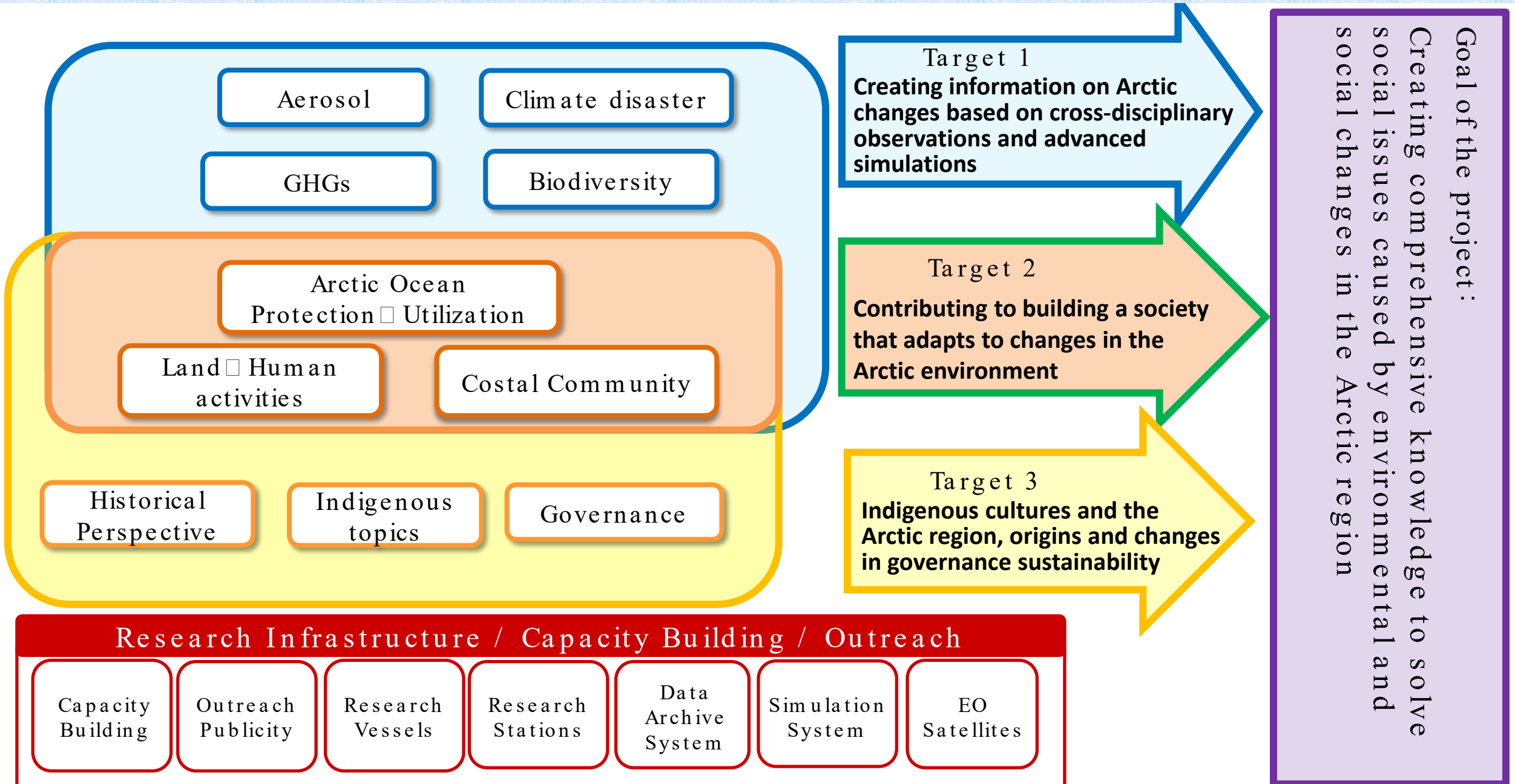
Full report (Japanese):

<https://www.nipr.ac.jp/arcs2/achievement/arcs2-report.pdf>

Achievement: <https://www.nipr.ac.jp/arcs2/e/achievement/>



Concept of ArCS III (2025-2029)





- Continue/Strengthen the observations **to fill gap areas and periods in the Arctic Ocean**
- Strengthen research capabilities with Mirai II as an **international research platform**

Cruise Targets in ArCS III

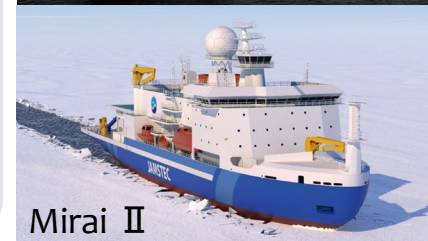
- Expand Japan's observational research
- Fill the observational gaps
- International Cooperation with Mirai II

□ Further development of Japan's Arctic Ocean observation research

- ✓ Expand and develop observation (High precision, Multiple elements/ Pacific Arctic Ocean)
- ✓ Develop new multi-sphere observations such as atmosphere-sea ice-ocean, land-ocean, and glacier-ocean
- ✓ Filling observation gaps in areas such as sea ice areas and the central Arctic Ocean, and in periods such as Polar Morning. Open data to contribute future predictions and understanding of global climate change

□ Initiatives toward an international research platform

- ✓ Promote/lead international collaborations (towards SAS-2 (2030), IPY5 2032-33)
- ✓ Call to solicit proposals from young researchers overseas and promote international exchange
- ✓ Hold international workshops for future planning



- Draft Cruise Plan during ArCS III project (2025-2029) -

2025
Pacific Arctic Ocean
(Mirai: Aug □ Oct)

- Mirai Last cruise
- 2nd Int'l Workshop

2026
Berling □ Chukchi Sea
(Oshoro: Jun □ Aug)

- Tr. cruise (open call)

2027
Pacific Arctic Ocean
(**Mirai II**: Aug □ Oct)

- Unobserved area
- ASSW 2027 in Hakodate

2028
Pacific Arctic Ocean
(**Mirai II**: Jun □ Aug)

- Unobserved period
- Observations based on ECR proposals (int'l call)

2029
● Central Arctic Ocean
● Canadian Archipelago
(**Mirai II**: Jul □ Oct)

- Unobserved area



● Japan's new research icebreaker, “Arctic Research Vessel (ARV) Mirai II”

December 2020: A construction of Japan's new research icebreaker had been decided.

November 2023 “**The first international workshop on Arctic Ocean observation:**
Future Collaboration by Research Vessels and Icebreakers” (Group photo below)

February 2024 The new icebreaker was named as “ARV Mirai II.”

March 19, 2025 Launching Ceremony

November 2026 Delivery

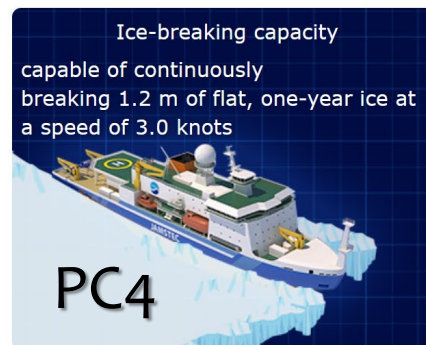
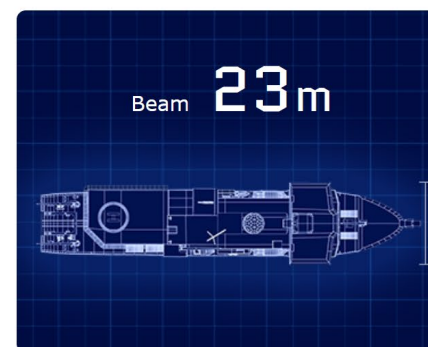
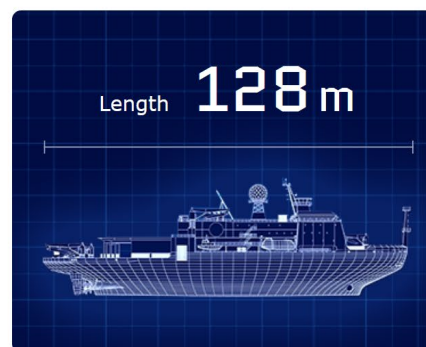
Summer 2027 First Arctic cruise



Launching ceremony at JMU Isogo Shipyard
on March 19, 2025



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Schematics of the specification of new research icebreaker. ARV Mirai II

ISAR-8 Oct.28-31, 2025
Hachioji, Tokyo
Call for Abstract ~May 19
<https://isar-8.net/circulars/>

Special Issue on ISAR-7 is
available from ScienceDirect/
“Polar Science”
<https://www.sciencedirect.com/journal/polar-science/vol/41/suppl/C>



ISAR-8

ISAR
International Symposium on
Arctic Research

Eighth International Symposium on Arctic Research

Second Circular (March 17, 2025)

Call for Abstract / Registration

Abstract Submission Deadline: May 19 (Mon), 2025
Early-bird Registration Deadline: May 19 (Mon), 2025

More Details: <https://isar-8.net/>



Date: October 28(Tue)-31(Fri), 2025
Venue: Tokyo Tama-Mirai-Messe,
Tokyo Metropolitan Tama Business Activation Center
Hachioji, Tokyo, Japan

Symposium schedule (As of March, 2025)

- October 28(Tue) : Opening, Keynote Speech, Breakout Session, Icebreaker
- October 29(Wed) : Keynote Speech, Breakout Session, Poster Session, Banquet
- October 30(Thu) : Keynote Speech, Breakout Session, Poster Session
- October 31(Fri) : Keynote Speech, Breakout Session, Closing

Organizations (As of March 2025)
Main Organizers : National Institute of Polar Research (NIPR),
Japan Consortium for Arctic Environmental Research (JCARE)
Co-Organizers : Hokkaido University,
Japan Agency for Marine·Earth Science and Technology (JAMSTEC)

Contact
ISAR-8 Local organizing committee
International Polar and Earth Environmental Research Center, National Institute of Polar Research (NIPR)
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