BEYOND ARCTIC PASSION

Transforming Arctic observations into actionable knowledge

Duration:
September 2026 - August 2030



www.beyond.arcticpassion.eu

Bringing people, knowledge and technology together to co-design a coordinated Arctic Observing System of Systems.

Actionable Knowledge for the Arctic

Situational Awareness
Safer transportation, environmental change, ecosystem knowledge

Risk Assessment
Stronger early warning and preparedness

Policy and Planning
Enable evidence-based decisions for a sustainable Arctic

Community Decision Making
Information access empowers local solutions

Open Data and Innovation
Accessible data drives research, services and innovation

Observing System Governance
Coordination, equity and sustainability

Funded by the European Union

At a Glance

The Arctic is warming nearly four times faster than the global average, reshaping ecosystems, communities, and economies — and the window to respond is narrowing. For years, scientists, Indigenous Peoples, communities and governments have worked to build a coordinated Arctic Observing System of Systems. Beyond Arctic PASSION is a major European and international contribution to that effort. Uniting 40+ partner organisations across 15 countries, the project connects satellites, ships, and sensors with Indigenous-led and community-based monitoring into one trusted, accessible source of Arctic knowledge for communities, scientists, decision-makers, and industry.

€8.5M
EU contribution

48
Months duration

40+
Partner organisations

15
Countries across Europe, North America & Asia

6
Arctic states

2
Indigenous Peoples' organisations

ONE
Shared Arctic Observing System Of Systems

Beyond Arctic PASSION builds on the foundations laid by Arctic PASSION, INTAROS, and other flagship Arctic observing initiatives — bringing their achievements together into one sustained, inclusive, and operational Arctic Observing System of Systems.

- ✓ *Connects Arctic observations across borders and disciplines*
- ✓ *Strengthens Indigenous participation and knowledge sharing*
- ✓ *Delivers actionable information for communities, decision-makers and industry*

What is the challenge?

- *The Arctic is changing faster than our current ability to observe it.*
- *Today's observations remain fragmented across nations, observing infrastructures, data systems and knowledge systems.*
- *No single organisation—or country—can solve this alone.*

Beyond Arctic PASSION addresses these challenges

Governance & sustainability – Inclusive, long-term coordination shaped by Indigenous Peoples, scientists, industry, and policymakers together

Outcome ➔ a coordinated Arctic observing system that stays resilient, usable and effective beyond the project.

Open, interoperable data – Connected data and knowledge systems enabling forecasting, modelling, and risk assessment

Outcome ➔ accessible knowledge that enables better, evidence-based decisions.

Closing observation gaps – Autonomous sensors, AI, and co-designed monitoring combined with Indigenous Knowledge and local knowledge

Outcome ➔ actionable information and tools different communities can use today.



FROM FRAGMENTED COMPONENTS

The Arctic is changing faster than our current ability to observe it. Observing system components are not integrated enough to address associated impacts and challenges

Observations
- In situ
- Remote sensing
- Autonomous platforms

Knowledge systems
- Science
- Indigenous Knowledge
- Local knowledge

Data systems
- Collection
- Standards
- Infrastructure

Governance
- Coordination
- Stewardship
- Policy

Communities and Livelihoods
- People
- Culture
- Economic activities

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TO COORDINATED IMPACT

Beyond Arctic PASSION connects people, knowledge, and technology to co-design a functional Arctic Observing System of Systems

COORDINATED ARCTIC OBSERVING SYSTEM OF SYSTEMS

Governance
Inclusive, coordinated and effective

Communities
Engaged, informed and empowered

Data
Open, trusted, interoperable and FAIR/CARE

Knowledge systems
Science, Indigenous Knowledge and local knowledge

Observations
Coordinated and fit-for-purpose monitoring

Observe
Collect diverse observations

Connect
Combine data and knowledge

Understand
Generate knowledge and insights

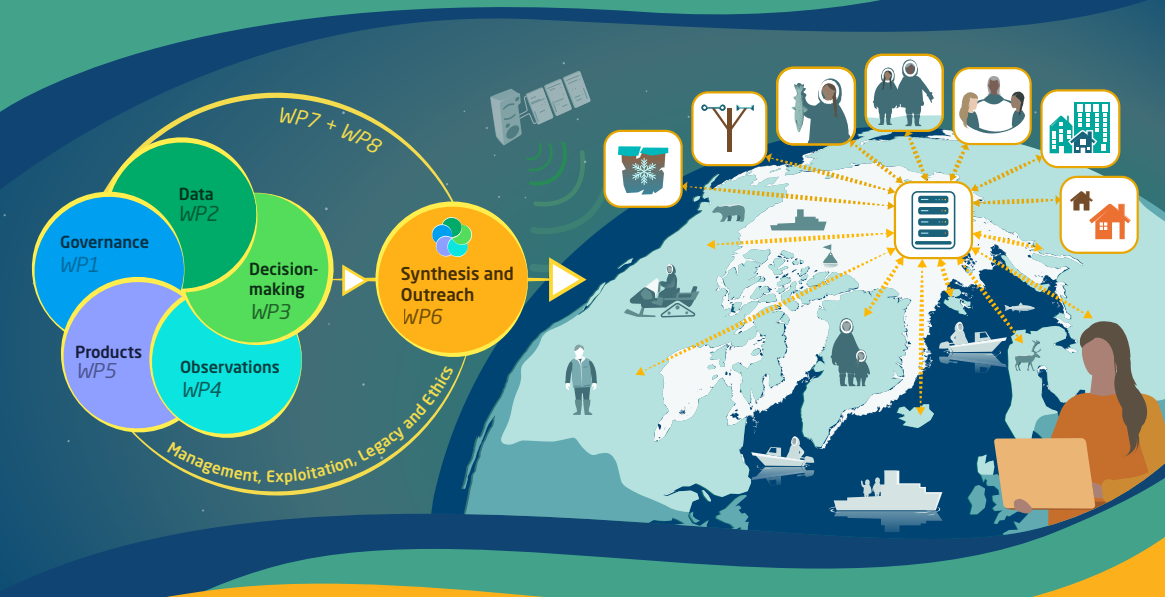
Act
Enable decisions and solutions

How will it be delivered?

Beyond Arctic PASSION accelerates a sustainable, advanced, and inclusive Arctic Observing System of Systems – combining cutting-edge science, Indigenous Knowledge, local knowledge, advanced technologies, and transparent governance.

The project is structured around seven interlinked Work Packages:

- *WP1 Governance & long-term sustainability*
- *WP2 A coordinated Arctic Data System*
- *WP3 Sustainable management & decision-making*
- *WP4 Marine & cryosphere observing systems*
- *WP5 Data products for end users*
- *WP6 Synthesis, dissemination & communication*
- *WP7 Project management, exploitation & legacy*
- *WP8 Ethics requirements*



Legacy

Beyond Arctic PASSION will result in a better coordinated, more equitable Arctic Observing System of Systems that continues delivering trusted, actionable knowledge long after the project ends.

Who is making it happen?

40+ organisations **15** countries

One shared vision

Beyond Arctic PASSION's strength lies in its breadth and experience: Indigenous Peoples' organisations sit alongside national research institutes and universities, operational data services, local government representatives, and industry, spanning Europe, North America, and Asia.



This diversity of expertise and perspective is not incidental; it is the foundation that makes a genuinely coordinated, trusted, and equitable observing system possible.

■ *partner countries*

European coordination bodies: European Polar Board, SIOS Svalbard Integrated Arctic Earth Observing System, INTERACT - International Network For Terrestrial Research And Monitoring (INPA),
Arctic Council Working Group: Arctic Monitoring and Assessment Programme Secretariat (AMAP)
Indigenous Peoples' organisations: Saami Council, Inuit Circumpolar Council - Canada and Greenland
Early Career organisation: Association of Polar Early Career Scientists (APECS)
Local and regional governance: Arctic Mayors' Forum
Gender and inclusion: Women of the Arctic
Science for policy: European Commission - Joint Research Centre
Science communication: GRID-Arendal
Private science sector: O.A.SYS - Ocean Atmosphere Systems GmbH
Data & Copernicus integration: Mercator Ocean, PANGAEA (AWI), Seascape Belgium, Norwegian Meteorological Institute
Canadian Institutes: Arctic Institute of North America, University of Ottawa, Carleton University
European Institutes: **Denmark:** Danish Meteorological Institute, Aarhus University; **Finland:** Finnish Meteorological Institute, University of Helsinki, University of Lapland; **France:** French National Centre for Scientific Research; **Germany:** Alfred Wegener Institute (AWI); **Greenland:** Greenland Institute of Natural Resources; **Italy:** National Research Council of Italy, National Institute of Oceanography and Applied Geophysics; **Norway:** UiT The Arctic University of Norway, Norwegian Polar Institute, Nansen Center, Institute of Marine Research; **Poland:** Institute of Oceanology Polish Academy of Sciences; **UK:** British Antarctic Survey, The Alan Turing Institute
Japanese Institutes: National Institute of Polar Research, Japan Agency for Marine-Earth Science and Technology
South Korean Institutes: Korea Polar Research Institute
USA Institutes: University of Washington, University of Colorado, University System of Maryland, University of Alaska Fairbanks

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BEYOND ARCTIC PASSION

Visit our webpage to follow the project's journey.

www.beyond.arcticpassion.eu

Different disciplines, different knowledge systems, one shared commitment to strengthening the Arctic's Observing System Of Systems.

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