



Arctic PASSION – Towards a pan-Arctic Observing System of Systems to serve Societal Needs

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Alfred Wegener Institute

Helmholtz Center for Polar and Marine Research

Learn more
here:



ARCTIC
PASSION





ARCTIC PASSION

Pan-Arctic Observing
System of Systems:
Implementing Observations
for Societal Needs

- European Commission H2020 Program
- 4 years, 15 Mio Euro, 18 countries
- > 30 partner organizations and 6 Indigenous Communities
- July 2021 – June 2025
- Website: www.arcticpassion.eu
- Coordination: Alfred Wegener Institute for Polar and Marine Research



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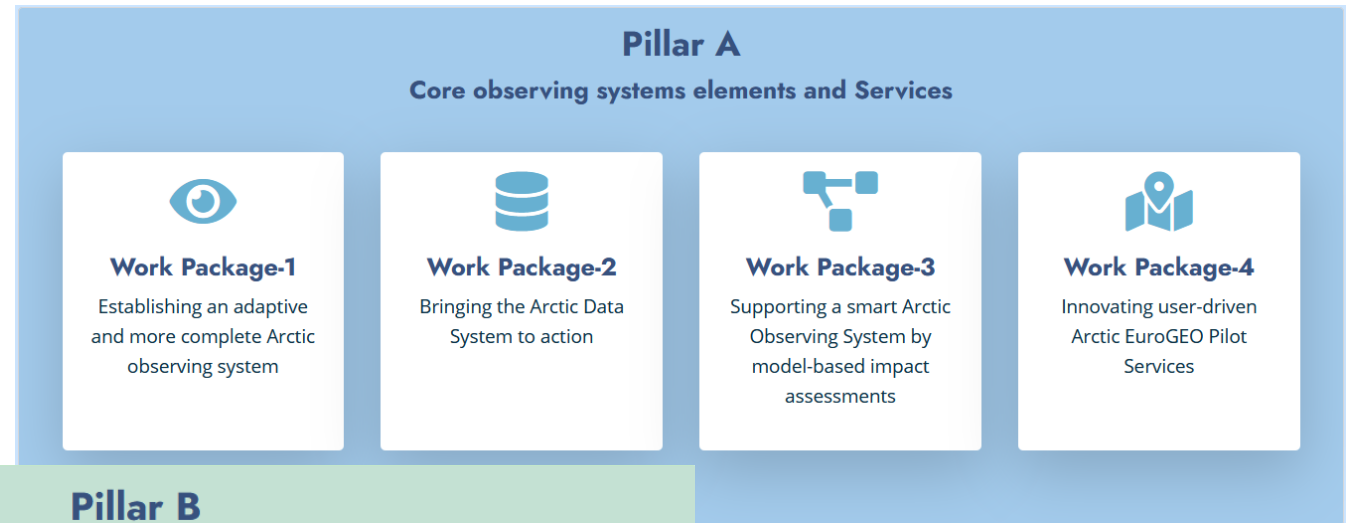
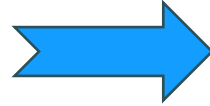


Overall Project Objectives

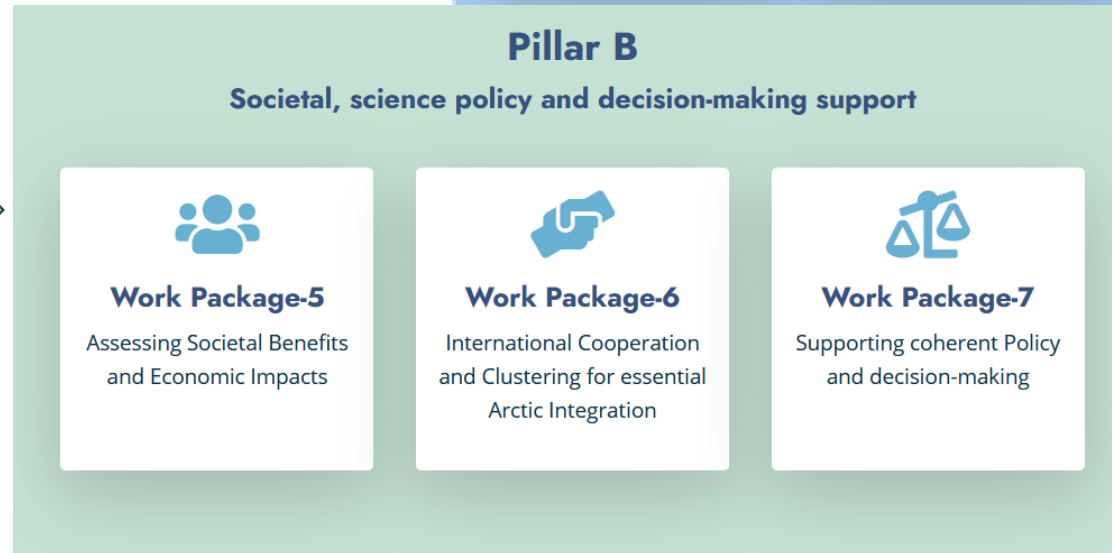
- Co-create a **coherent, integrated and sustainable pan-Arctic Observing System of Systems**
- Meaningful collaboration with **Arctic communities, Indigenous Peoples and organisations;**
- **Expand monitoring capabilities**, also through **broad inclusion of Indigenous Knowledge and Local Knowledge;**
- Improve **data interoperability** and simplify access to 'application-ready' environmental data for the benefit of all users;
- **Improve monitoring to support predictions, risk assessment, inform and guide mitigation and adaptation and sustainable development**
- Develop **EuroGEO Pilot Services and support SAON to upgrade Arctic GEOSS into a 'GEO initiative'**
- Initiate **SAV Expert Panels** and develop SAVs in support of SAON's ROADS program

The Structure of Arctic PASSION

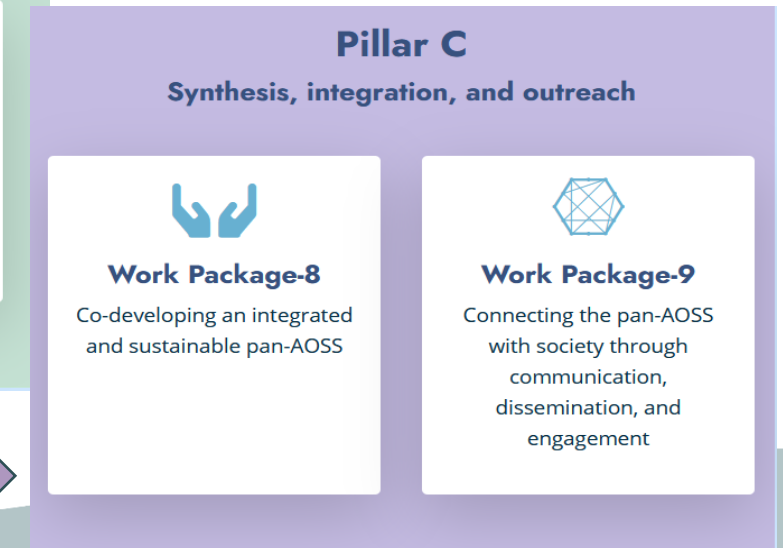
Strengthening
core observing
system elements



Decision-making
support



Synthesis and
outreach



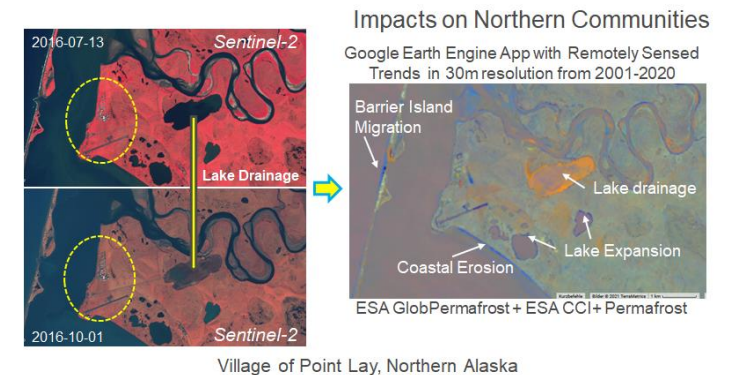
PS1: 'Event Database of CBM Using Oral Histories, IK and LK' (Snowchange)

Ph.: Snowchange



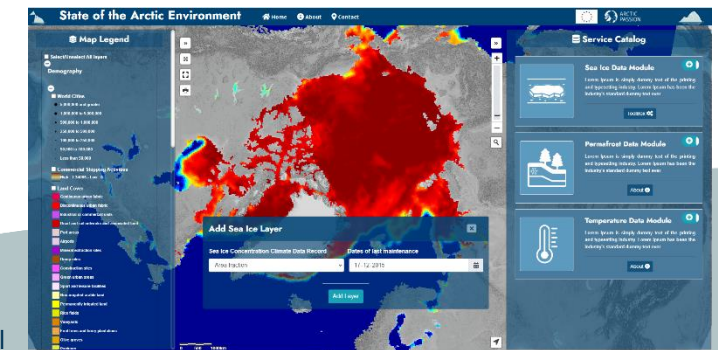
PS2: 'Pan-Arctic requirements-driven Permafrost' (AWI)

G. Grosse & A. Irrgang, AWI

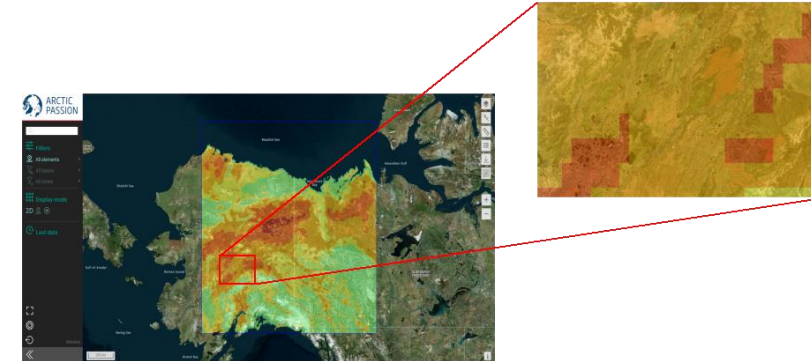


PS3: 'State of the Arctic Environment' (NPI)

A. Sundfjord, NPI



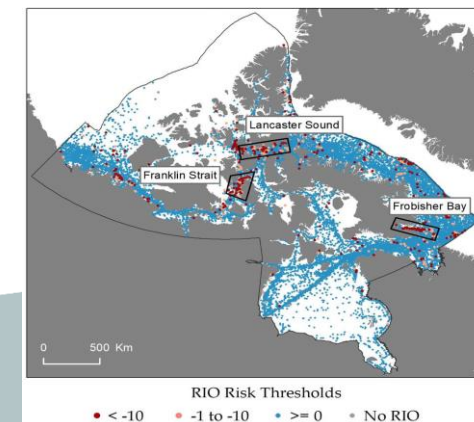
PS4: 'Integrated Fire Risk Management - INFRA' (CNR)



PS5: 'Local Atmospheric Pollutant Forecast Service' (JRC)



PS6: 'Improving Safety for Shipping in the Polar Seas Service' (BAS)



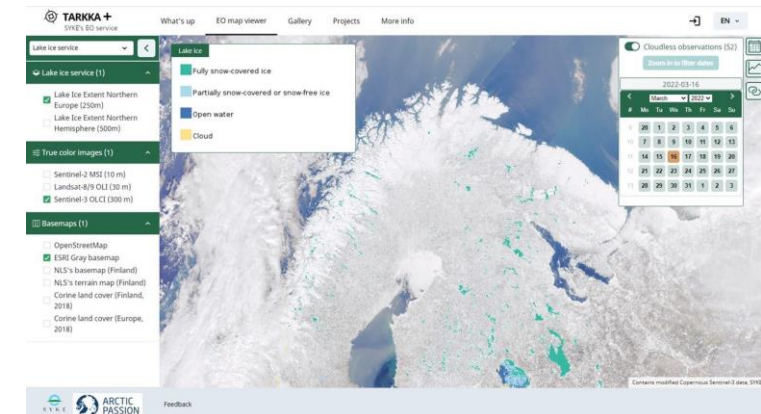
PS7: 'CBM for Arctic marine climate change, noise pollution & impacts on marine living resources' (GINR/DMI)

S. Olsen, DMI



PS8: 'Lake Ice Service for Arctic Climate and Safety' (SYKE)

K. Heinila, SYKE



Shared Arctic Variables (SAVs)

Concept based on SAON ROADS and Arctic Observing Summit (AOS).

Sets of observables that help tackling local/regional problems (based on science, IK & LK)

Arctic PASSION with Canadian partners and US RNA CoObs first projects to launch SAV processes



Three SAV themes

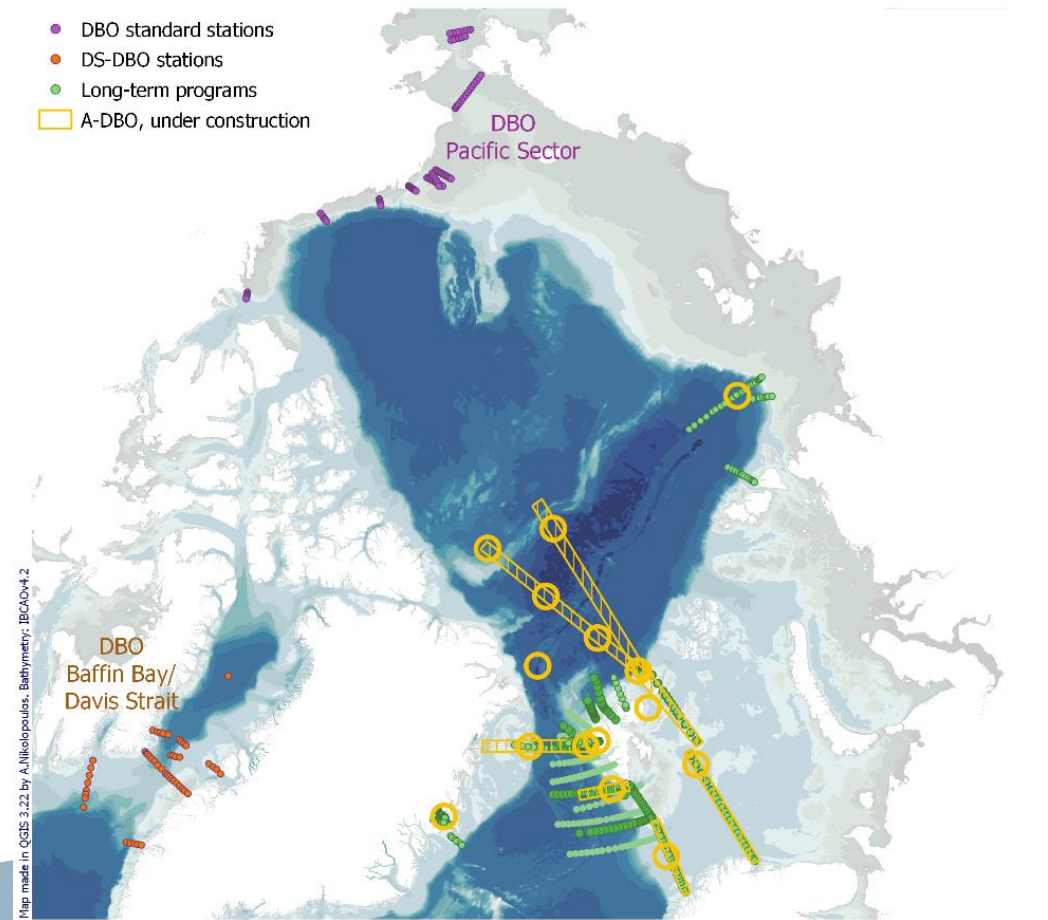
- *Permafrost (Living on frozen ground)*
- *Wildfires*
- *Sea Ice*

Launching an Atlantic-Arctic DBO (A-DBO)

Developing an Atlantic-Arctic Distributed Biological Observatory (A-DBO) in collaboration with the Pacific and Davis Strait/Baffin Bay DBOs

Implementing a comprehensive marine observing system for climate and environment in the Atlantic sector of the Arctic Ocean

Better integrated and accessible observations across disciplines within dedicated geographical areas of common interest and relevance (focus areas/hotspots)



A. Nikolopoulos, NPI

<https://arcticpassion.eu/adbo/>



EU polar observation – challenges ahead in terms of technology and governance

- Increased and streamlined collaboration
- Enhanced co-creation
- Refurbished funding structures (e.g.: funding inclusion of IP from call-writing process onwards, international cross border funding schemes)
- Enhance Interoperability and FAIR, TRUST and CARE principles
- Lean and transparent governance structure
- Establishment of sustainable communication channels between end-users, data-providers and the governance structure

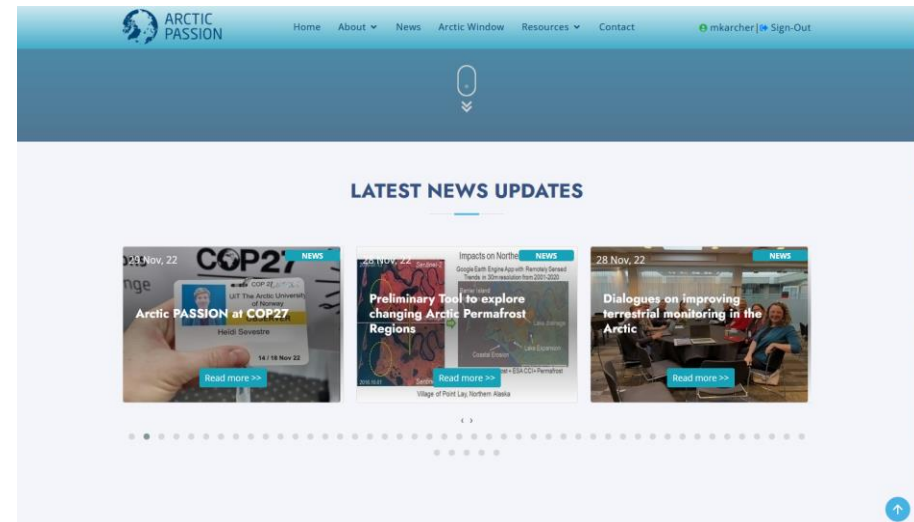
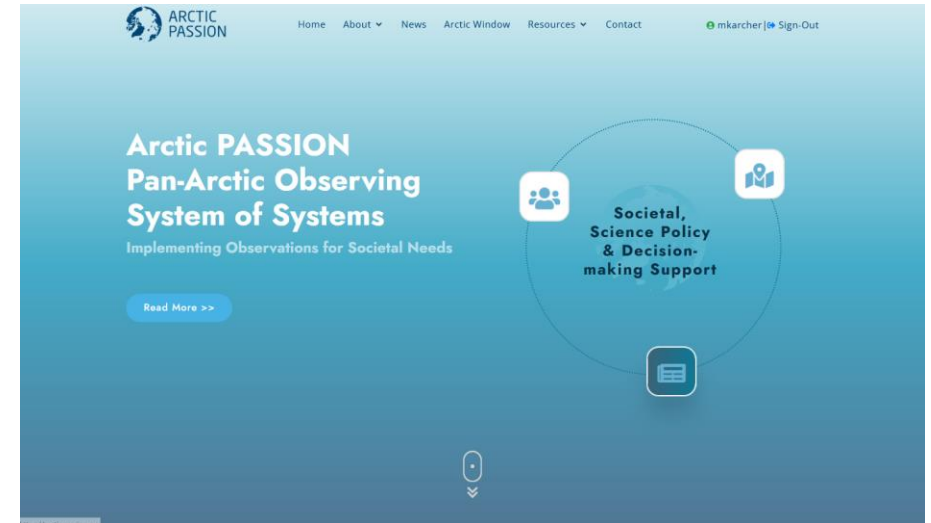


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Appearance or sessions at upcoming meetings:

- Arctic Frontiers (Jan/Feb 2023, Tromsø)
- ASSW (Feb 2023, Vienna)
- ISAR-7 (March 2023, Tokyo)



Website:

www.arcticpassion.eu

