

ARICE

“Making the Arctic accessible for excellent science”



www.arice.eu



Nicole Biebow
ARICE Coordinator



Grant agreement No 730965

The ARICE team



16 partners from 13 different countries



Demand



YOOPP
YEAR OF
POLAR
PREDICTION

the
**Nansen
LEGACY**



MOSAIC

International
Arctic Drift
Expedition



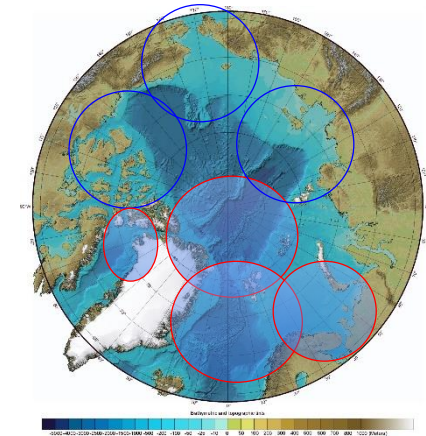
Synoptic Arctic *Survey*



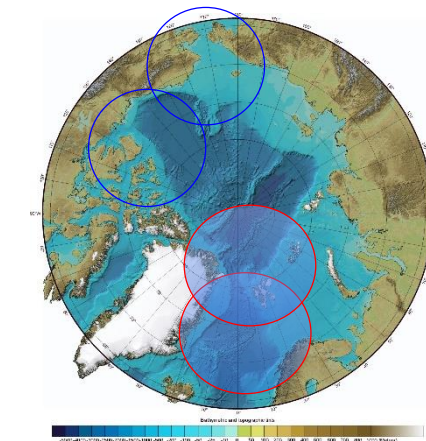
Heavy icebreakers in the Arctic



Summer operations



Winter operations



- EU Polar Research Vessels
- Non EU Polar Research Vessels



Background

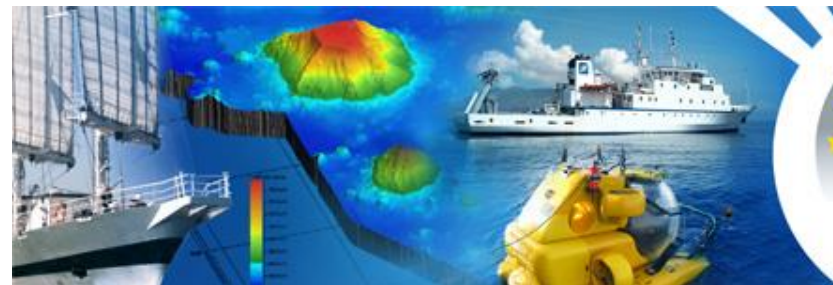


ERICON Aurora Borealis Project



- **BMBF:** technical design
- **FP7:** legal, financial and scientific frameworks for its implementation

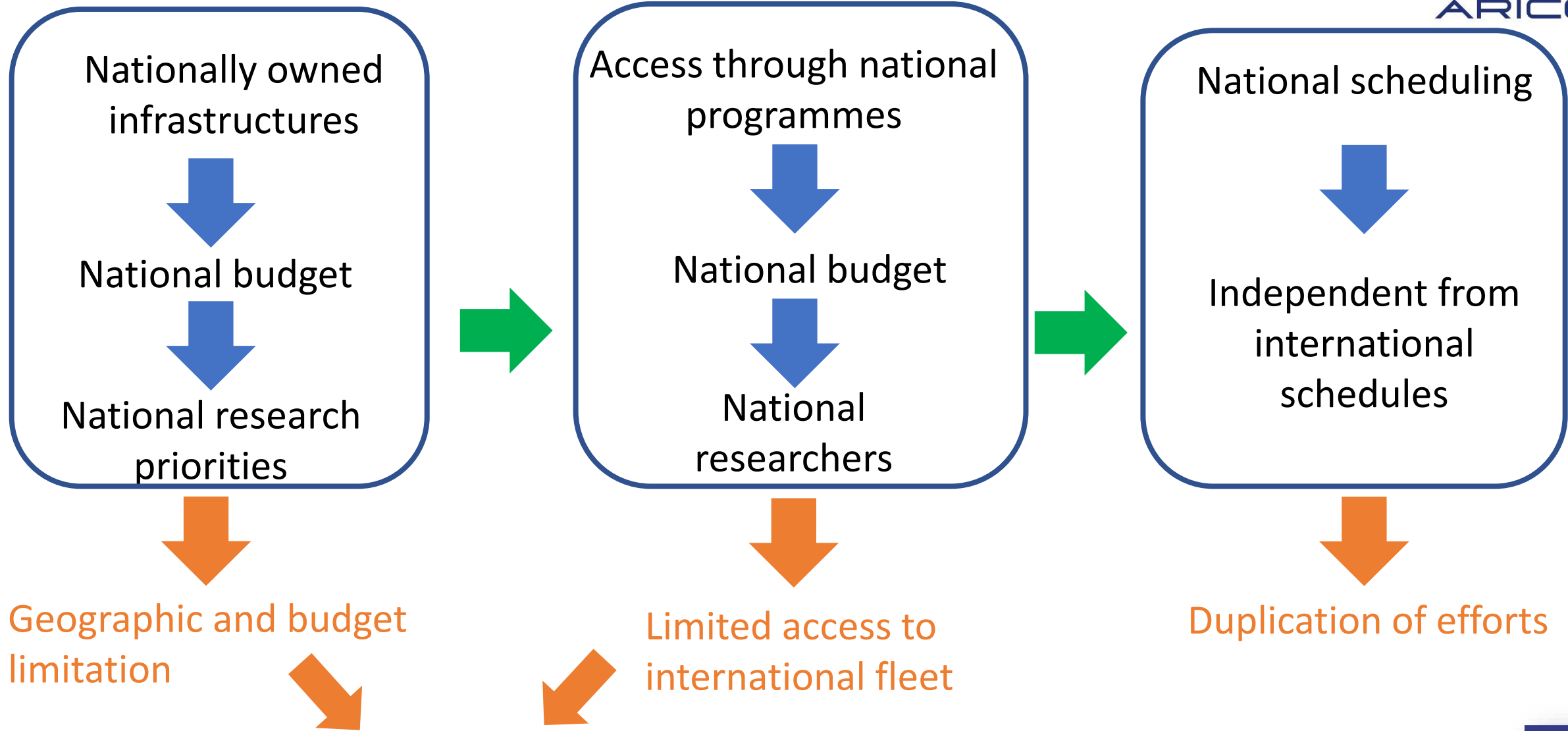
RV Sanna (GINR, GL)
Geographic area: **Greenland**
PI: **Laura de Steur (NIOZ, NL)**
Cruise duration: **8 days**
Main discipline: **Physical Oceanography**



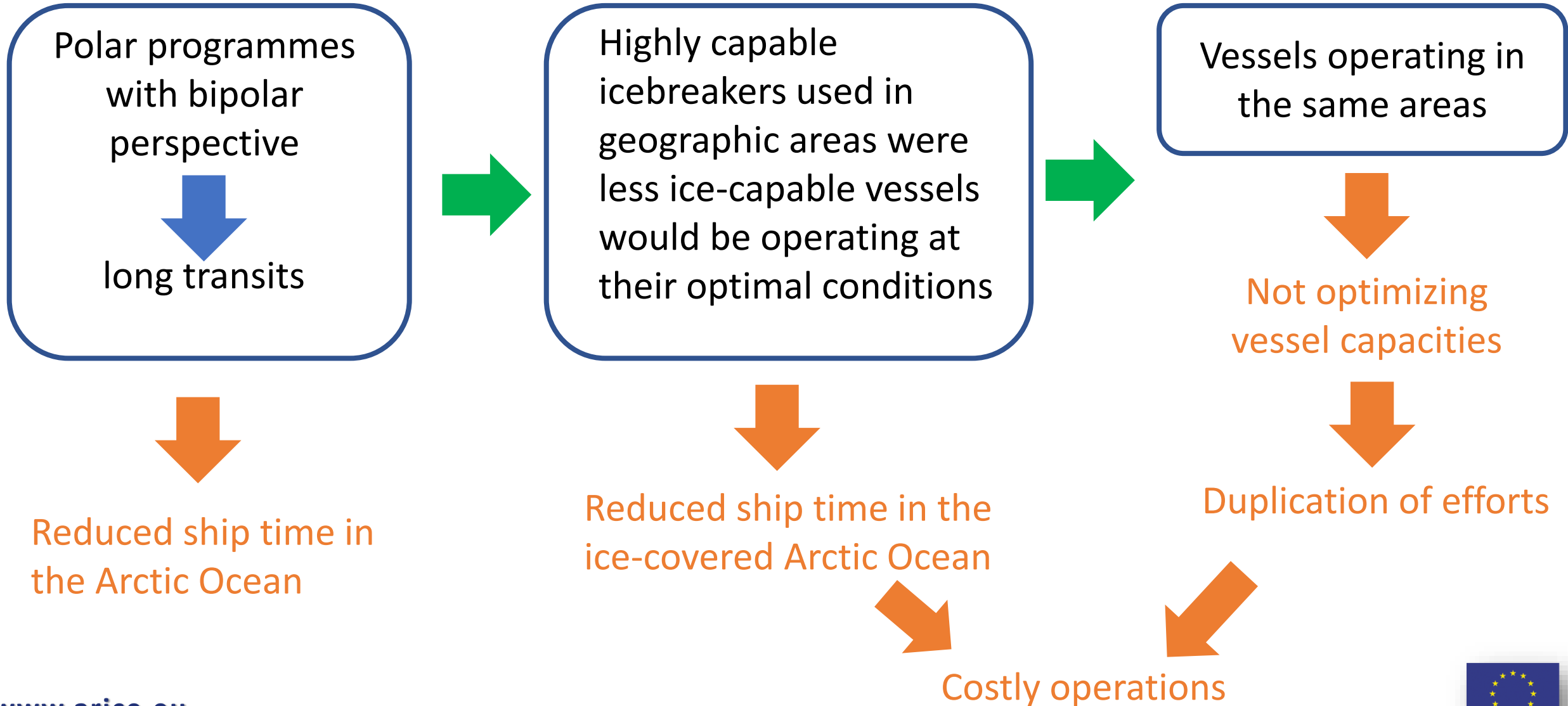
Eurofleets



Polar Research Vessels - Operation



Polar Research Vessels - Operation



Networking

1. **Harmonisation of the European Arctic Research fleet** and better coordination of the icebreakers with the ice-strengthened vessels,
2. **Developing an international Arctic Research Icebreaker Consortium** which shares and jointly funds ship-time on the heavy icebreakers,
3. **Establishing a regular dialogue with the maritime industry** to identify opportunities for cooperation between business and research, and
4. **Educating a new generation** of polar researchers and professionals

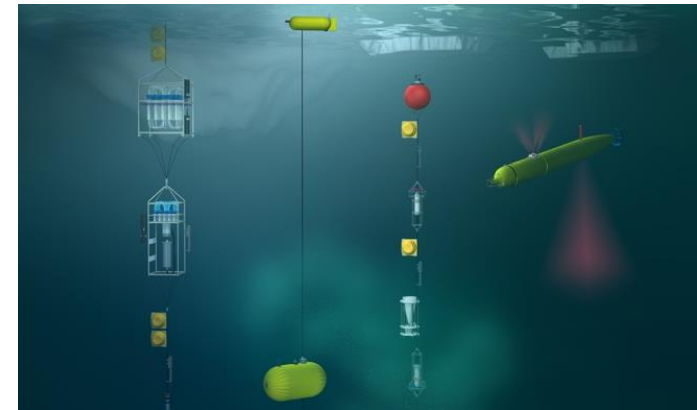
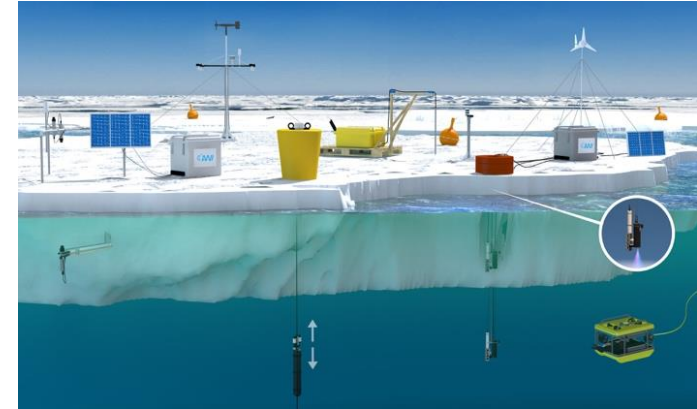


ARICE goals



Joint research activities

1. Expanding the monitoring and observation capacities in the Arctic Ocean by:
 - **partnering with maritime industry** on a “ship of opportunity” programme
 - exploring into **new key technologies** that could lead to an improvement of ship-based and autonomous measurements in the Arctic Ocean
2. Enhancing a **virtual and remote access of data** by developing a **3D Virtual Icebreaker** – visual presentation of the ARICE data management system



ARICE goals



Providing trans-national access to a set of **six** key European and international icebreakers for European scientists based on scientific excellence of submitted proposals

PRV Polarstern, DE



RV Sikuliaq, USA



CCGS Amundsen, CA



RV Kronprins Haakon, NO



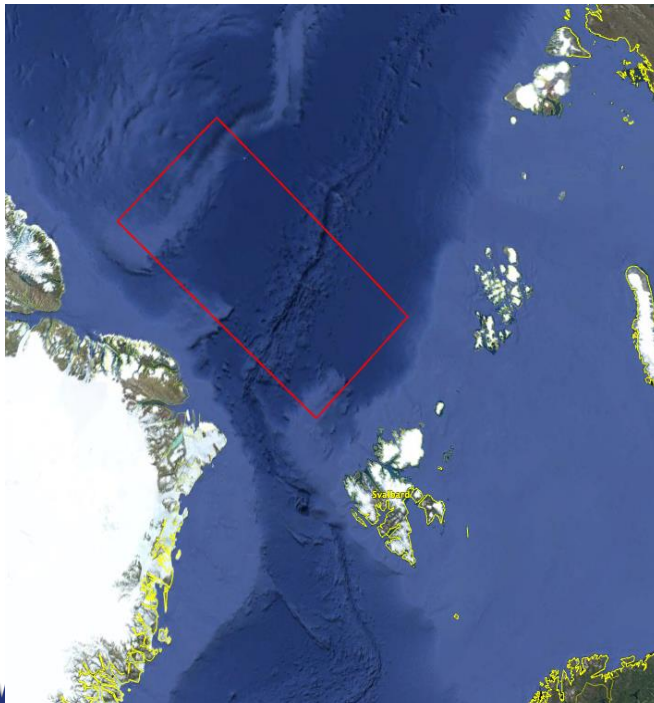
IB Oden, SE



MSV Fennica, FI



IB Oden – Terms of access



Research associated with the Synoptic Arctic Survey (SAS)

(<http://www.synopticarcticsurvey.info>)

Days: 7

Berths: 7

2020 – August to September : Western High Arctic Ocean between Svalbard and Ellesmere Island

(following the preliminary schedule for Oden)

Scientific disciplines: Marine Ecosystems, Physical Oceanography, Carbon Cycle & Ocean Acidification

Scientific limitations: Geophysics, Coring, Fisheries cannot be supported

Dedicated budget for travel and shipping expenses: 45.000€.



Eligibility criteria



Affiliation (1): The PI and the majority of the users **must work in a country other than the country the requested infrastructure is based**

Affiliation (2): More than 50% of the users **must work in an institution established in a member state of the EU or state associated to H2020**

Affiliation (3): PI of proposal from the same institution of chief scientist on board

International cooperation: proposals must involve **at least three partners from three different countries.**

Training: Proposals must **include an advanced training or educational programme for scientists or technicians.**



Dissemination: unless the users are working for SMEs, users must be **entitled to and willing to disseminate the knowledge** they will generate under the User groups must agree **to comply with the ARICE data policy** (to be developed).

Cruise length: proposals are **encouraged to adjust** their research plans to the number of days offered per RV. **Additional days can be chartered** by successful applicants **if agreed with the ARICE PRV operators**.

In addition: The PI or a designated **cruise leader** of a proposal must have the appropriate **scientific/technical expertise** to conduct on-board research surveys.

ARICE Scientific Liaison Panel (SLP) – Members



CHAIR: Michele Rebesco
OGS, IT
Seismostratigraphy



Henk Brinkuis
Royal NIOZ, NL
Palaeoceanography



Søren Rysgaard
Aarhus U., DK
Marine microbiology
/biogeochemistry



Marit Reigstad
UiT, NO
Carbon cycling



Marcel Nicolaus
AWI, DE
Sea ice



Benjamim Rabe
AWI, DE
Arctic ice



Lars Eric Heimbürger
MIO, FR
Chemical oceanography



Lise Lotte Sørensen
Aarhus U., DK
Atmospheric physics



Jeremy Wilkinson
BAS, UK
Sea ice dynamics



Waldemar Walczowski
IOPAN, PO
Oceanography



Arne Riedel
Ecologic, DE
Ethical Advisor



Evaluation Criteria

The SPL will apply the principles of **transparency, fairness and impartiality**

- **Selection on scientific merit**, with priority given to user groups that:
 - ✓ have not previously used the installation, and
 - ✓ are working in countries where no equivalent research infrastructure exist.
- **Additional criteria:**
 - **Societal impact**
 - **Training of young generations**

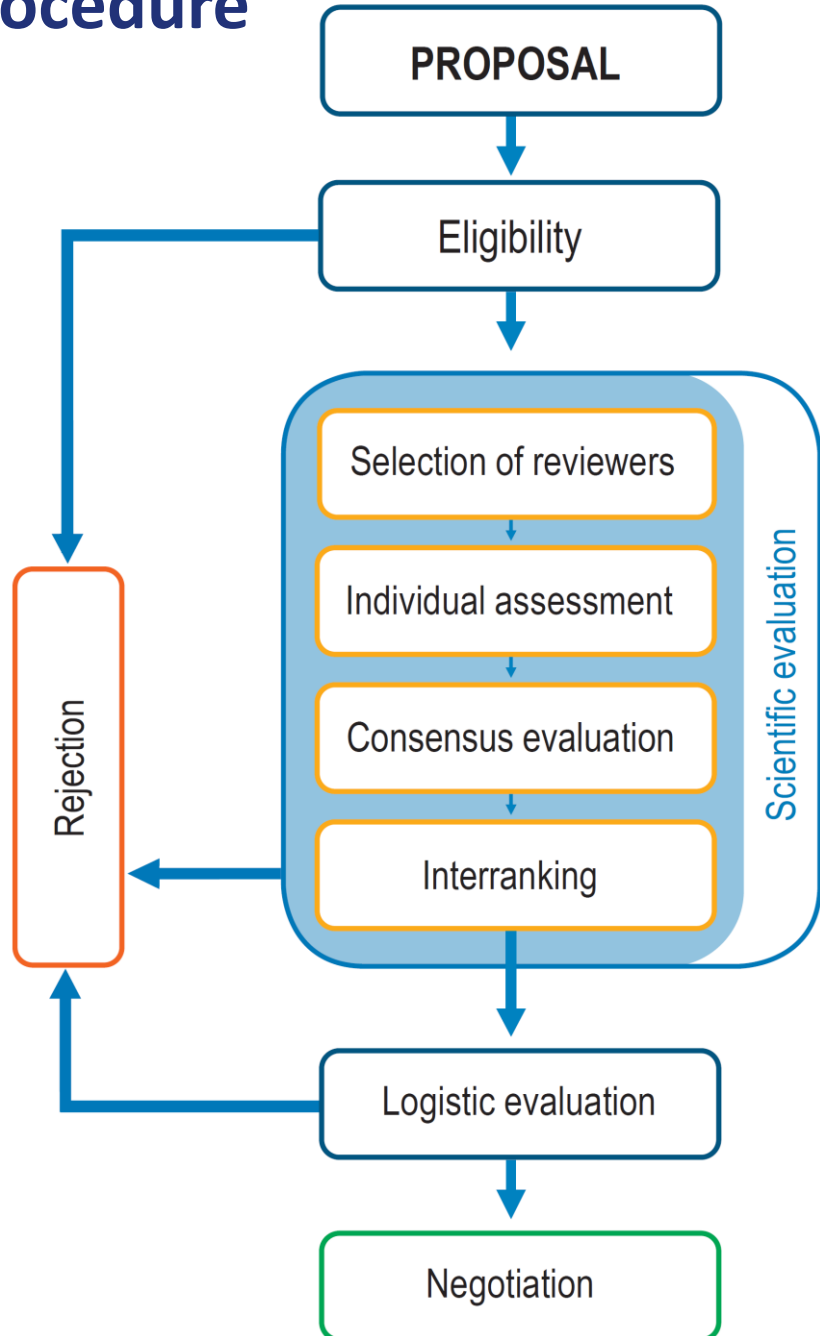
Applications are encouraged from:

- **Early career scientists**
- **Female scientists**
- **International scientists**
- **Industry and SME partners**



Evaluation Procedure

Proposal evaluation system



Bodies involved in the proposal evaluation and evaluation procedure

Evaluation Office (EO)

Scientific Liaison Panel (SLP)

External evaluation by at least 3 external experts, recommended by the SLP based on their scientific expertise.

Operational Liaison Panel (OLP)



Strength and weaknesses of the transnational access



Strength of the ARICE / EUROFLEETS transnational access system:

- **Free of charge** since ship-time, transport and travel is fully funded by the ARICE project,
- **Widens research possibilities** since researchers can apply for vessels which are usually very difficult for them to access and can work in areas in which their national vessels do not work,
- **Joint international proposal and evaluation system** for ship time proposals – this is unique and took us two years to negotiate in EUROFLEETS 1
- **Supports excellent science** since selection is based scientific excellence and not on feasibility,
- **Strong international component** since researchers are forced to collaborate with at least two partners from other countries and can only apply for vessels from other than their own country
- **Open to participants from all over the world**, no financial restrictions for non-European participants anymore,
- **Strong support for users without equivalent infrastructure** in their home countries since they are prioritized if their proposals are excellent,
- **Strong support for early career scientists** since on board training is mandatory

Strength and weaknesses of the transnational access



Strength of the ARICE / EUROFLEETS transnational access system:

- **Project based and therefore not sustained.** Due to the extremely high costs also very difficult to sustain without EU support or other third-party funding,
- **Further laboratory work is not funded,** therefore sometimes delays in publishing the results,
- **Quite narrow working areas and time windows for of operation** to avoid application which cannot be implemented because the vessel will never work in this area,
- **Transit time and mob/demob time** is not funded,
- **Eligibility criteria can be difficult to meet** if an early career researchers want to be PI, due to the strong international component

Thank you very much for your attention –
Questions?

