



STATEMENT FROM THE POLAR OPERATORS

Paris, 8 November 2023

- **Polar science is critical to humanity:** Information from polar scientists conveys the reality. Our world is changing fast, it is changing now, and those changes will affect humanity. The poles play a crucial role in driving climate and as such cannot be overlooked. They are “engines” for our climate, not sentinels. Indeed, the world's ocean and cryosphere have been “taking the heat” through absorbing a significant part of the excess CO₂ for decades as the recent IPCC Special Report on Oceans and Cryosphere in a Changing Climate (SROCC) demonstrated. This will continue in the future even if emissions stop now but there is an upper limit as to how much heat and CO₂ they can absorb without reaching tipping points. The consequences for nature and humanity could be severe, with impacts already occurring across the planet. We can only fully understand how oceans and ice are changing and affecting the world's equilibrium by continuing polar science.
- **Polar Science requires exceptional support:** Research in the polar regions requires high levels of technicity and expertise based on our experience. Logistic support includes infrastructure, ships, aircrafts, traverses or convoys, assets, and experts to implement and deliver not only at a single point in time, but through continuing long-term sustainable efforts. National polar operators are primarily national polar institutes or other institutions, who work collaboratively through bodies like the Council of Managers of National Antarctic Programs in the Southern hemisphere (<https://www.comnap.aq/>) and the Forum of Arctic Research Operators in the Northern hemisphere (<https://faro-arctic.org/>)¹. Countries work collaboratively in polar science to share efficiencies in operations, to get best value from infrastructure investment, and to facilitate safety of personnel. The latter is crucial to all operators: **Safety is our primary concern**. In addition, for every scientist, it is necessary to have science support personnel. A study by the COMNAP revealed that the ratio of scientists to operational field personnel in Antarctica is on average 1 to 9. Beyond that, additional scientists and science support personnel work from their home institutes, without deploying, to support the work done in polar regions. The work of operators is so imbricated with the work of scientists that heads of polar institutions often have backgrounds in both operations and science. In a nutshell, **no logistics, no science**. With this in mind, any governmental support to science should include support to operations.

¹ There are other local or regional consortiums of operators in the Arctic beside FARO but these will not be discussed here.

Polar science delivery is founded on these fundamental principles:

- 1) **Safety of Human Life.** Polar work is not without risk. This risk is considered on a continuing basis at the national and international levels through COMNAP or FARO to ensure that field deployments mitigate and minimize to the lowest extent possible risk in operations. This often requires multi-national planning, collaboration, and commitments to readiness. Through COMNAP and FARO and in collaboration with other stakeholders, operators will continue this good practice and will further enhance their cooperation before, during, and after the field operations.
- 2) **Leadership through Example.** Operators are acting to decarbonise and increase efficiency of their polar activities. Carbon emissions from Arctic or Antarctic research activities are a small contribution by global standards, however, moving this forward is a leadership position on sustainability that operators are embracing. To this end, operators will continue to exchange amongst themselves on novel renewable energies, new materials and new techniques to limit their carbon debt. With support from governments, they strive at renewing their infrastructure to render them more efficient, more sustainable, and framed to better welcome future innovative science and scientists and science support.
- 3) **Investment in Technological Innovation.** Polar operators are constantly looking for development and application of innovative technologies that will support us to increase autonomous automatic data acquisition systems. This will open a new scientific dimension, complement our ground-truthing, increase the safety of operations, and reduce direct environmental impact.
- 4) **International Collaboration.** In the spirit of the Antarctic Treaty (1959) and the Arctic Council (1996), we recognise that polar science cannot be delivered by one country acting alone under any geopolitical circumstances. In addition to promoting operational cooperation, we promote data and results sharing in scientific communities and beyond. We recognize that this requires significant investment in both infrastructures to house the data, and in personnel for curating and maintaining the databases. Sustainable long-term data series are essential as we aim for the conservation of polar ecosystems.

DELIVERABLES

Polar data acquisition is only possible through a nexus of scientists and operators that relies on practical, technical and non-political expertise through regional, national, and international support networks.

Recommendations:

- Actively promote the **continuing collaborative work** of countries to undertake the science and science support that will fill our knowledge gaps related to changes in oceans and cryosphere.
- Increase financial investments into the **modernization of polar stations** and activities. Investments in the short-term will have long-term payback.
- Increase investments in **people (scientists AND operators), infrastructures, and assets** that will enable implementation of the critical science required. In this regard, increasing stable and permanent professional positions for early career persons will secure the long-term science and science support needed to answer critical societal questions and facilitate the translation of scientific results to policy actions.
- Promote shared use of stations, infrastructure, activities, and vessels to help **limit artificialization** of the polar regions.
- Recommit to the intrinsic and wilderness values of the polar regions by **prioritizing environmental protection values** over expansion of non-scientific or non-educational activity in the areas.

Yan Ropert-Coudert

Director of the French Polar Institute Paul-Emile Victor

Michelle Rogan-Finnemore

Executive Director of the Council of Managers of National Antarctic Programs (COMNAP)

Antonio Quesada del Corral

Chair of the Council of Managers of National Antarctic Programs (COMNAP)

Jennifer Mercer

Chair of the international Forum of Arctic Research Operators (FARO)