European Polar Board

Policy Brief on the Impacts of High Fuel Prices on Polar Research

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The polar regions are unique realms of planet Earth; they are sentinels of climate change and the impacts related to human activity, but they are also examples of peaceful international cooperation in Earth system research and nature protection. Europe has a long tradition and strong reputation for world-class scientific research in the polar regions. This research is enabled and supported by a multitude of key scientific infrastructure, facilities, and platforms operated by many European nations and their international partners in both the Arctic and the Antarctic.

Nowhere on Earth are the effects of climate change more acute than in the polar regions, which are inextricably linked to global processes and serve as vital repositories of past climate data. They are unique, with fragile, biodiverse environments which depend on the strict balance of climatic processes. In the Arctic, there are also people and cultures who are acutely vulnerable to environmental shifts. Eleven of the sixteen climate tipping points, which signal irreversible and drastic changes in global climate systems, are located in the polar regions.

The sensors, fieldwork, and taken samples in the polar regions inform the most up-to-date assessments in international scientific and policy fora on the future of the climate and the environment. Continued research in these regions, and support of the infrastructure that enables it, is indispensable for nations to understand how climate change will affect them, and to make informed decisions on how to respond.

Marine and aviation fuel costs have as much as doubled over the last year - a huge strain for polar programs who need to dedicate up to 80% of their funds to logistics. The programs that have infrastructure in remote and difficult to reach areas (like IPEV), have been hit particularly hard. In 2022-23, polar programs are actively trying to overcome the 2 year backlog in projects, voyages, and other activities that had been postponed due to Covid-19 pandemic. This rise in cost has compounded these delays and risks undermining crucial polar research, thereby jeopardising the basis for solid policy-decision systems.

Considering the above, three priorities arise.

First, the need to maintain current projects, research, and infrastructure. Much of the current activity and infrastructure in the polar regions serves efforts spanning years or more, and as such a drop in maintenance or activity could severely disrupt years of work, continuity of studies and data, access to essential knowledge on regional and global changes, and be costly – if not impossible – to start again.

Second, to secure adequate funding for all EPB members to realise their commitment to reducing their carbon footprint through adopting new research on technologies and methodologies and adopting more sustainable equipment. This requires sustained long-term funding, but these efforts are also at risk if adequate funding is not provided in the short term.

Third, to ensure that polar regions remain an inherently collaborative, international arena. Polar programs frequently share infrastructure, logistics and technical know-how, and polar projects often involve multiple international partners. A break in this tightly knit network undermines trust between programs and nations to be reliable scientific partners, and severs collaborations that underpin crucial ongoing research.

To overcome the current hurdle of rising fuel prices, ensure robust research into the future, and accomplish the above priorities, the EPB recommends that:

Policy makers and polar program managers work together to make priorities and challenges of polar research clearly understood at the national and international levels. Situations such as the current fuel price increase require a timely response from policy-makers to support critical infrastructure and logistics requirements to prevent an erosion of capacity. Budgetary viability for the operation of polar infrastructure needs to be maintained to ensure continued European leadership in global polar research.

Our commitment is this: European polar programs have committed to and continue to strive towards long-term goals to ensure their groundbreaking research can continue despite challenges in the recent years. European polar programs are also committed to finding sustainable solutions and reducing long-term environmental impacts of polar research. To pursue these commitments into the future, short-term funding is necessary to overcome the current challenges.

Examples of EPB member actions include:

- Sharing best practices on fuel efficiency between polar programs, including station managers, vessel operators, and project planners, and work with organisations like COMNAP, FARO, SCAR, IASC and others to understand current efforts in this direction.
- Collaborating and working on identifying and implementing renewable energy and energy-efficiency in logistics and facilities.
- Developing methods of research, sample and data collection which minimise the carbon footprint of polar research, whether via autonomous monitoring systems and vehicles, or through analysis and synthesis of existing data.
- Developing information-sharing tools on infrastructure capacity to maximise transportation efficiency of personnel and cargo and to ensure that space is fully utilised.

European polar research ranks among the best in the world, and the programs responsible for it recognise the unique role they play in helping decision-makers tackle climate change. Short-term price increases such as that seen this year cannot be allowed to impact the viability of polar infrastructure, nor the long-term collaborations and projects being pursued to carry European polar research into the future.