

## *Safeguarding the Arctic*

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The Arctic is changing rapidly. Ice sheets are melting. Landscapes are altering. Mining companies, petroleum exploration firms and shipping lines are lining up to invest in one of the planet's last frontiers while aboriginal communities look on nervously, uncertain what these massive changes will bring.

The Arctic is being reshaped by climate change. Rising temperatures are melting sea ice at a startling pace, opening up vast sources of natural resources and northern marine transit routes that were previously inaccessible or impassable.

Because climate change means warming in the Arctic is occurring three times faster than in other regions, sea ice is melting earlier each spring and what remains is thinner than before. Scientists are no longer speculating about whether the Arctic will eventually be ice-free, but calculating just when.

These changes in Arctic ice conditions are having immediate impacts on wildlife like polar bears and on infrastructure like roads and pipelines. But the effects are not limited to the area north of 60. Cold Arctic air serves to moderate the Earth's average temperature as sea ice reflects as much as 85 per cent of direct sunshine. Less sea-ice means more direct sunlight, leading to warmer temperatures, changing ocean circulation patterns and the release of millions of tons of methane, a greenhouse gas.

Global leadership on Arctic issues has long been the purview of the Arctic Council, an intergovernmental body comprised of eight Arctic countries including Norway, Russia and the U.S.. One of the main tasks of the Council, currently chaired by Canada, is to spearhead research on climate change, including the impact of warming trends on oceans, marine life and migratory species.

But the Arctic can no longer be viewed as the protected backyard of a few governments. More nimble groups like Arctic-Net already bring together researchers from universities in Canada to work with colleagues in Norway, Finland and Russia, but also in France, Japan and Spain.

From October 12-14, Iceland's President hosted the inaugural meeting of the Arctic Circle, including governments from the Arctic and beyond as well as global companies as diverse as Google to discuss the rapidly changing Arctic. Also represented were the Intergovernmental Panel on Climate Change, the Inuit Circumpolar Council and the International Institute for

Sustainable Development (IISD), which has identified the Arctic as a priority area, looking at issues such as climate vulnerability, subsidies to the mining sector and traditional knowledge and public participation.

These encounters are a sign that governance of the Arctic Council has to be made more inclusive. Already, many countries with no jurisdictional claim to the Arctic are being recognized as observers, including China, Singapore and India. While geo-political reasons may be at play, the legitimacy of their concern around climate change cannot be denied. The impact of Arctic ice melting means that rainfall patterns and the frequency of extreme events like droughts and flooding are changing worldwide.

Canada has already indicated that it wants to include business in the discussion on the Arctic's future, urging the Council to create a Circumpolar Business Forum. The Centre for the North is hosting a summit in Whitehorse that will assemble mining companies, regulators, Aboriginal communities and NGOs to explore the region's challenges and prepare for a boom in natural resource projects.

With all this underway, now is the time to make sure that we get Arctic science and development right. A real partnership must be built with aboriginal communities by finding ways of bridging traditional knowledge and quantitative science methods.

And in the rush to develop these resources and open up new sea routes, clear principles are needed to ensure that these activities occur in an environmentally sound way, and deliver tangible benefits to communities. Indigenous organizations must be leaders in the debate and have decision-making authority at the table.

All this needs to happen quickly. For years, shipping companies eyed Arctic passages as mystical routes that would save time and money. In August, that idea became a reality when a Chinese container ship navigated the shrinking ice of the Arctic, shaving more almost two weeks and 2,400 nautical miles off the route between China and Europe.

In 2009, when the Arctic Council examined Northern shipping, the idea of an Arctic sea passage seemed very remote. The Council concluded that basic infrastructure needed to ensure safe vessel traffic, data like maps for safe navigation and accurate meteorological forecasts, were absent as were emergency response capacities should an oil spill occur. Cleanup equipment like booms was thousands of kilometers away while dispersants were largely ineffective in cold waters.

This lack of preparedness is unfortunately not unique to ships. When I was Commissioner of the Environment, I noted that Canada wasn't ready to respond to an accident from offshore oil platforms and audits found that liability limits for offshore exploration were out of date and significantly lower than elsewhere.

The federal government has moved to deal with several of these gaps, including increasing liability limits to cover the cost of environmental cleanups. Yet it will take a great deal more effort to create a system that is up to the challenge of operating in the unforgiving North and there is no time to wait.

We need to move on these challenges now, before the resource boom shifts from a possibility to reality. We need to get this right.

Published by the International Institute for Sustainable Development.

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