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The Arctic and
Its Future

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The *SGI Quarterly* aims to highlight initiatives and perspectives on peace, education and culture and to provide information about the SGI’s activities around the world. The views expressed are not necessarily those of the SGI. The editorial team (see inside back cover) welcomes ideas and comments from readers.



What is a nuclear submarine doing in our backyard? (p.10)



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— Northern Sea Route
— Northwest Passage

The Arctic and Its Future

“It is a land of sublime beauty, humbling terror, and natural wonder. If not there, what place in our world will we dedicate to silence and solitude? To look upon or even only consider those vast horizons stretches both the imagination and the soul.” —Alvah Simon, *North to the Night*

The Arctic, with its forbidding climate and rugged beauty, has long been seen as the ultimate wilderness; a place whose very severity has isolated it from the ravages of industrial society. But the world is changing. And nowhere is the magnitude of that unfolding change more apparent than in the Arctic. Here the cultural, political, economic as well as environmental impacts of global warming are playing out in stark clarity.

As the Arctic warms and melts, access to previously inaccessible resources will become possible, and major new international shipping routes could be opened. Who will benefit, and what do we stand to lose? Buddhism sees our lives as an integral and inseparable part of the natural environment. We all have a role to play in creating the future, and from this viewpoint, the *SGI Quarterly* considers how we can ensure that a sense of responsibility—to the natural world, the 4 million inhabitants of this unique and fragile region, and to all humanity—guides our actions from now on.

Managing the Arctic

Interview with David Leary

David Leary is the author of *Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International Law and Policy in the Polar Regions*, the report and recommendations from an international expert symposium held at the University of Akureyri, Iceland, in September 2008 and chaired by Dr. Leary. The symposium was convened by the United Nations University (UNU) Institute of Advanced Studies (Japan), in conjunction with the University of Akureyri (Iceland). Dr. Leary, formerly a Postdoctoral Fellow at UNU, is currently a Senior Research Fellow at the University of New South Wales Law School in Sydney, in his native Australia.

SGI Quarterly: Why is there so much political interest in the Arctic now?

David Leary: Climate change is making the Arctic much more accessible than it ever has been. With the melting of the ice there are new sea lanes opening up that would cut global shipping times considerably. There's interest in the possibility of access to new oil and gas resources which lie under the sea—Norway and Russia are already opening up oil and gas fields in their own territory including on their continental shelf. There are also a lot more tourist vessels now going further into the Arctic.

A number of new strategic, geopolitical and environmental issues are emerging that have until now been, for lack of a better term, frozen, due to the fact that the Arctic has always been so inaccessible. There's the question of whose territory the new oil and gas resources are in; how the environmental impact of exploitation of these resources is going to be managed; who's going to be



responsible for rescuing vessels when there are shipwrecks; if there are shipwrecks there are going to be oil spills and environmental damage . . . all those sorts of issues that have been opened up by climate change, as well as the threat of the extinction of Arctic species, like the polar bear.

SGIQ: Is there a real possibility of military conflict developing?

DL: The rush for resources and the new grab for territory in the Arctic that we hear about repeatedly in the media—that does not necessarily have any basis either in fact or in international law. It's a much more complicated picture than the frenzy

the media is portraying.

Reference is often made to the fact that the Russians planted a Russian flag at the bottom of the ocean at the North Pole. So the argument is, is that a grab for territory by Russia? Well, as a matter of law, no, it's not. The days are long gone when countries could just claim territory by planting a flag. There is now a very clear process and mechanism for how countries' claims to the continental shelf for example are managed and how disputes over territory are to be resolved, and Russia, in particular, has been following that process very closely.

In fact, at the Akureyri symposium in Iceland we heard that the planting of the flag wasn't directed by the Russian

government but was a publicity stunt by scientists to draw attention to their research.

SGIQ: So there is clear cooperation happening in terms of sorting out the territorial claims?

DL: Yes. The main areas of interest in terms of oil and gas are on the continental shelf, and there's a process under the United Nations Convention on the Law of the Sea for countries to lodge their claims to the



The village of Kulusuk in Greenland

Wile Miletment Creative Commons

continental shelf. Those claims have to be backed up by a lot of scientific data which is then assessed by an international body of experts under the Law of the Sea Convention.

Russia was one of the very first countries to go through that process, which is still under way, and has adhered to both the letter and the spirit of the Law of the Sea provisions. So this media frenzy over the planting of the Russian flag is not matched by the reality.

Other countries are taking a considerable interest in what's happening in the Arctic. China, for example, is very active in scientific research in the Arctic and interested in what's happening with exploration and exploitation of oil and gas. So it's very much a period of change, but I think the media portrayal is more about selling newspapers.

There are a lot of issues that have to be worked through, certainly on the environmental front, such as preventing and cleaning up after pollution, as well as about safety and sea and air search capacity to rescue vessels.

Opposing Views

SGIQ: Are existing mechanisms adequate to deal with these issues?

DL: There's a divergence of opinions. The Arctic states, for example—Canada, Denmark, Norway, Russia and the U.S.—in May 2008 issued the Ilulissat Declaration, in which they basically said we don't need any more treaties or institutions for the Arctic; as Arctic states we have a special stewardship

“A number of new strategic, geopolitical and environmental issues are emerging that have until now been ‘frozen’ due to the fact that the Arctic has always been so inaccessible.”

role in managing the Arctic, and we're perfectly happy that existing international law is adequate to deal with that. And in particular they referred to the Law of the Sea as providing the framework.

But some states outside the Arctic and the nongovernmental organizations suggest more needs to be done to manage environmental issues in the Arctic. That was certainly the view supported by many of the participants in the Akureyri meeting. The World Wildlife Fund, for example, is putting forward the argument that there is a strong need for stricter environmental regulation in the Arctic, for new treaties and new institutions especially when it comes to managing off-shore activities such as oil and gas exploitation.

There was a lot of debate at this meeting in Iceland about whether we needed a whole new treaty or whether we could work within existing mechanisms like the Arctic Council or some of the bodies associated with other regional structures such as the Nordic Council of Ministers, or whether we needed something similar to what we have in Antarctica, where there is a dedicated series of treaties that deal with issues there.

The Madrid Protocol to the Antarctic Treaty, for example, sets out detailed regulations about what you can and can't do in Antarctica, how environmental impacts are to be assessed, and who's got authority to determine what activities should occur.

In the Arctic it's essentially up to each individual Arctic state to determine what they do in their own areas of jurisdiction, and the limited area that's beyond national jurisdiction is like the rest of the ocean beyond national jurisdiction, essentially unregulated.

Antarctica Comparison

SGIQ: What is the essential difference between the Arctic and the Antarctic, and could a system similar to the Madrid Protocol work for the Arctic as well?

DL: Antarctica is international space. The Antarctic Treaty effectively froze territorial claims. It basically says that for countries that claim parts of Antarctica, we're not going to admit that your claims are legitimate, but also we're not going to deny that they might be. What we will do as the international community is to work together in the future to manage Antarctica in the best interests of all of humanity. The whole environmental management regime that has grown up in Antarctica and the Southern Ocean has been made possible by the way these treaties have dealt with the dispute about the territorial status of Antarctica.



Feature

In the Arctic it's a very different scenario. There's almost no disputed territory, with the limited exception of some minor territorial disputes and the debate over some areas of the continental shelf. The overwhelming majority of land areas and considerable areas of ocean space are clearly recognized as the sovereign territory, or otherwise under the jurisdiction, of those Arctic states, which they have jealously guarded for a long time.

During the Cold War there was no discussion about what was happening in the Arctic. But with the end of the Cold War and the initiative of Gorbachev that led to the creation of the Arctic Council, the Arctic states through the Arctic Council and other bodies have been looking at and responding to some of the environmental issues I have mentioned.

The debate at the moment is whether we should continue with these mechanisms. There's been a lot of criticism about the things that have not been done, but the Arctic states themselves maintain that the only thing they will agree to is the continuation of the existing mechanisms.

I think it's not something in which we're going to see a change overnight. There's going to be a long debate on many of these issues. And some of these issues won't even be decided by the Arctic states; they're going to probably be dealt with in other forums like the International Maritime Organization, a UN organization which has the main responsibility for regulating international shipping.

SGIQ: Wouldn't an international environmental treaty for the region be a natural way to go?

DL: It's an emerging debate. To be fair to the Arctic states, when they say that mechanisms or forums like the Arctic Council would be the appropriate place to deal with some of these issues, that doesn't mean that they're not going to deal with the issues. Their view is that it should be that measures are proposed and implemented by the states that are active in the Arctic



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A liquefied natural gas plant at a newly discovered gas field in the Norwegian Sea

“We need an effective and rapid response negotiated through the forums of the UN Framework Convention on Climate Change.”

Circle, rather than by another body.

The Arctic Council has been quite active in the last few years on a range of issues. Our awareness of long-range pollution in the Arctic—like mercury and PCPs that have come from a long way away and ended up in the food that's eaten by indigenous people in the Arctic—came directly from work that was commissioned by the Arctic Council. On many issues the Arctic Council has done an excellent job. The question now is whether this is still adequate.

New Threats

SGIQ: I understand that there are a number of new environmental threats that will present themselves once the Arctic opens up.

DL: One of those issues would be a threat to fish stocks. At the moment there's no regional management of fisheries in the Arctic, so there is a real risk of overfishing.

When you have more ships coming into the Arctic, you also have the problem of alien invasive species that are contained in the ballast water that ships discharge. Globally, alien invasive species are a huge environmental problem.

The Akureyri symposium also looked at some of the human rights challenges that the Arctic region faces. There was a referendum late last year

that approved greater autonomy for Greenland and set up a process for it to possibly become an independent state in the very near future. That raises some interesting questions in terms of the sustainability of a new state in the Arctic. Whether there's capacity in Greenland to manage some of the new environmental challenges the Arctic faces is unclear.

On the positive side, though, there's a strong argument that this is the end of a process of righting hundreds of years of colonial injustice.

SGIQ: What role do you see for the UN in all of this?

DL: The obvious role for UN processes really goes back to what's causing some of these issues to arise, and that's climate change. We need an effective and rapid response negotiated through the forums of the UN Framework Convention on Climate Change.

I think what we're going to see—and this is not necessarily a negative thing—is a more robust regional approach to some of the other issues. We may see different responses, different structures, for different issues. I don't think the Arctic states will be able to ignore the concerns of the rest of the world and stick to this argument that they have a special role as stewards in the region to manage what's going on. Clearly there are other outside actors who are increasingly interested in what's going on in the Arctic.□

The Akureyri symposium report and recommendations can be downloaded at www.ias.unu.edu/.

Living on Thin Ice

By Juliette Jowit

British explorer Pen Hadow is the first man in history to trek solo and unaided to the North Pole. Now, though, he is embarking on a very different expedition. In February he left northern Canada to trek more than 1,000 kilometers to the North Pole, but this time he is traveling with fellow polar explorers Ann Daniels and Martin Hartley, and they will be dragging with them 100-kg sleds laden with equipment to take up to 12 million readings of the depth and density of snow and ice beneath their feet.

Very little is understood about the depth and density of the Arctic sea ice. Hadow's Catlin Arctic Survey hopes to provide the much-needed data about how much ice is left, and so help work out how much time we have to prepare for what is probably the most immediate, truly global threat of climate change.

Measurements of sea ice began in the 1960s, but for three decades there was too little data to be sure what was happening. Since the 1990s, satellite maps have been used to calculate the height of snow and ice above the waterline, but experts have to make assumptions about the roughly five-sixths of mass underneath. Few scientists have the inclination, physical endurance, time and money to do the training necessary to spend months in the Arctic.

Early polar explorations left a trail of graves, men killed by hypothermia,

scurvy, gangrene—and for all the advances in modern technology, many risks still remain.

"Some people talk about the Arctic as a monotonous wilderness of white, but if you open your eyes and look at the landscape, especially in spring, you realize that there are no whites whatsoever," says Hadow in his autobiography *Solo*. "Everything is in shades and tones of pastel colors—cream, grey, blue, green, yellow, orange, pink."

"All the time there is the ever-present grinding cold."

Nor is the Arctic a great flat glass to glide over. Hadow will have to clamber over steep walls of frozen slippery ice rubble which test both his strength and patience.

Then there are the wind and currents, which constantly work on the great floating, constantly changing landscape, grinding ice together, pulling pans apart. Not infrequently travelers have to make huge detours or backtrack over a ridge or rubble field because of an impassable lead, a channel of open water in the ice; occasionally they wake to find they have drifted south of the point they began walking the previous day.

At night, they lie with their heads on the ice and listen to it. "You wouldn't conceive such random movements could produce such metronomic sounds," says Hadow. "It's disconcert-



Follow Hadow's progress at www.catlinarcticsurvey.com

ing because it tends to be the ice breaking up around your tent. You have to take a view: will this open up and will we be falling in in the morning, or will it be little hairline cracks rather than major fractures?"

And all the time there is the ever-present, grinding cold. In temperatures as low as -50°C , with windchill that can sink to -90°C , travelers cannot stop for more than 10 minutes to mend equipment or they start to freeze—mucus dries like gravel in the nose, contact lenses would freeze to eyeballs, and as the temperature drops the human brain begins to slow, making people less responsive to problems.

As they travel across the ice pans, a specially designed radar will take a measurement every 10 cm. The team will also regularly drill cores of snow and ice and take measurements of the ocean temperatures below. The data will be fed back via satellites to scientists every night, and they hope that early results will be available before the UN Climate Change Conference in Copenhagen, Denmark, in December, when the world's governments will be asked to agree on an ambitious treaty to cut greenhouse gas emissions and so, it is hoped, reduce global warming and the resulting climate change. □

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