Arctic Bulletin

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Toxic impacts in the Arctic

AMAP releases new report

Contents

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Editorial

The Arctic and the world

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Many think of the Arctic as an isolated region, far removed from the rest of the world. In reality the Arctic is increasingly linked to, and threatened by, international political and economic events. Trouble in the Middle East translates into renewed interest in arctic oil, gas and mineral resources, particularly in Russia. Resource development, driven by security concerns, will be fast. There will be a lot of money at stake, with little time for planning development, environmental protection, or structural changes that protect the rights of Russia's arctic indigenous peoples.

The international threat of terrorism also has echoes in the Arctic. In arctic Russia and elsewhere, a Cold War legacy survives in the form of stored nuclear, biological and chemical weapons, nuclear waste and nuclear fuel. We rightly focus on the threat these pose to human life, but the long-term threats to the environment are significant (p. 18).

At the World Summit on Sustainable Development (WSSD) (p. 19), a number of critical issues for the Arctic were at stake: climate change, renewable energy, fisheries and toxics. Environmentalists and advocates for developing countries fought hard, and mostly unsuccessfully, to keep world governments from rolling back the commitments of the past ten years. Still, Canadian and Russian promises to ratify the Kyoto Protocol were a bright spot, as was Russia's June signing of the Stockholm Convention on persistent organic pollutants (p. 7).

In the smaller political arena of the Arctic the eight arctic countries, indigenous peoples' organizations, and observers, including WWF, have just met in Inari, Finland, at the third Arctic Council Ministerial Meeting (p. 4–5). Ministers were very aware of the threats that toxic chemicals pose to the region. But some of the most important issues weren't even discussed.

Fishing, for example, is the human activity with the biggest impacts on arctic marine environments. The Arctic's fisheries are the second biggest economic sector in the region, yet the Arctic Council has only one small project that addresses fisheries issues.

Oil and gas development in the region is likely to increase dramatically over the next ten to 15 years. Some of these resources will be transported by sea, others by pipeline through frontier areas. Yet the Arctic Council's only major initiatives on oil and gas issues are voluntary guidelines on offshore development, which are in a few respects weaker than existing regulations in some arctic countries; and maps of biological resources at risk from oil spills, which already need to be updated.

Even the most conservative scientific projections show that climate change is likely to have deep, wide and serious effects in the Arctic. Here at least, the Arctic Council is hard at work on the Arctic Climate Impact Assessment (ACIA). But if ACIA is to have any value, it must be more than a survey of existing and potential impacts. It must be coupled with real commitments by governments to cut CO_2 emissions and to invest in measures to help arctic residents, and species, adjust.

3rd Arctic Council Ministerial Meeting:

Arctic countries send the "A" team

On October 10–11, 2002, the Arctic Council held its third ministerial meeting in Inari, Finland. In contrast to the last Arctic Council ministerial meeting in Barrow, Alaska, most arctic governments were represented at a very high level: the foreign ministers of Canada, Finland, Iceland and Sweden; the Norwegian State Secretary for Foreign Affairs; the US Undersecretary of State for Global Affairs; the Russian Deputy Minister of Trade and Economic Development; and the Danish Senior Arctic Official.

Finland has led the Arctic Council for the past two years. In Inari, it passed the baton to Iceland. WWF highlights below the Arctic Council's achievements – and failures – under Finland's guidance.

Inari.

■ The Arctic Council is a high-level intergovernmental forum that includes the eight arctic countries, organizations representing the indigenous peoples of the Arctic, and observers, including WWF. The Council meets every two years at a ministerial level, and addresses issues of environmental protection and sustainable development in the Arctic.

Increased international visibility highlights Council's weaknesses

Sustained Finnish effort, particularly by Council chair Ambassador Peter Stenlund, connected the Council to important international and regional processes. Probably the biggest development is the increased involvement of the European Union. The EU now participates on a regular basis in Council meetings, and with an assist from Denmark has incorporated arctic issues into its Northern Dimension policy, and may be a funding source for the Arctic Council's work on sustainable tourism. A second significant change is funding from international financing institutions, such as the Nordic Environment Financing Corporation and the Global Environment Facility, for Arctic Council projects. Other important international actors such as the United Nations Environment and Development Programs (UNEP and UNDP), the World Bank and the European Bank for Reconstruction and Development (EBRD) are also increasingly involved.

Compared to other international and regional processes, the Arctic Council nonetheless remains a weak organisation. It has no secretariat, no secured, long-term funding, and most importantly no concrete policy mandate. It cannot produce big deliverables, such as international agreements or blocs united on specific arctic issues. Finding a meaningful role for the Council in international fora will be a challenge for Iceland as the new chair.

Arctic Council re-organisation fails

At the 2000 Arctic Council ministerial meeting in Barrow, Alaska, representatives from the arctic governments demanded a more efficient structure for the Arctic Council's working groups. Attempts to meet this demand failed. The Council now has six working groups and initiatives, of which four focus on pollution.

This duplicative structure drains resources that could be spent on concrete projects and policy initiatives . The blame for this lies squarely on those countries that refused to compromise in negotiating a restructure, for fear of losing influence over the Council's work.

Arctic Council working groups

■ Arctic Monitoring and Assessment Program (AMAP)
http://www.amap.no

AMAP is the co-ordinating body for contaminants research in the Arctic. For the past two years, AMAP has worked on a new assessment of arctic contaminants issues: *Arctic Pollution 2002* (see p. 6). The report, issued on October 1, also includes policy recommendations to the arctic governments.

First on the policy agenda is ratification and implementation of the Stockholm Convention, a global agreement to reduce and ultimately eliminate the most toxic persistent organic pollutants (POPs). All arctic countries except for the US and Russia have ratified the convention. But three pressing issues remain: funding continued monitoring of both banned POPs, and new persistent toxic substances; adding new substances to the Stockholm Convention; and initiating a global process to reduce emissions of organic mercury. Arctic ministers were positive to these issues, but made few specific commitments.

■ Arctic Climate Impact Assessment (ACIA)
http://www.acia.uaf.edu/

At the Barrow meeting, the arctic countries agreed to conduct an assessment of the current and projected impacts of climate change in the Arctic. Like AMAP's *Arctic Pollution 2002,* the Arctic Climate Impact Assessment will summarize existing knowledge, both scientific and traditional, and make policy recommendations. The US is a major contributor, providing 2.5 million USD in support of ACIA, and hosting its secretariat at the University of Fairbanks, Alaska.

Work on specific chapters has already begun. At the Inari Ministerial, the US questioned whether the current plan – to complete ACIA in 2004 for submission to the Ministers – allowed enough time for political review of

Finnish successes, Icelandic challenges

the assessment and policy recommendations. By contrast, Norway suggested an intersessional Ministerial meeting in 2003, for an update on the progress of ACIA.

ACIA is perhaps the most internationally significant product to come out of the Arctic Council. It was clear at the Ministerial that ACIA also will be politically contentious. It is expected to show real and serious impacts of climate change already in some parts of the Arctic, with significantly more change to come. ACIA's main funder, the US, is now the only arctic country that has refused to ratify the Kyoto Protocol. Canada and Russia have indicated that they will ratify. In this context, ensuring a scientifically objective assessment and strong policy recommendations will require high-level diplomatic skills, and determination, from the new Icelandic chair.

Arctic Council Action Plan to Eliminate Pollution of the Arctic (ACAP)

http://www.arctic-council.org/acap.asp

The Arctic Ministers created ACAP in 1998 as a response to the 1997 AMAP report on arctic contaminants, the *State of the Arctic Environment Report*. ACAP, started by Norway and now to be led by the US, was the first Arctic Council initiative to develop, finance and carry out field projects. Its success, albeit on a small scale, demonstrates the potential of the Council to move from assessment to policy to direct action.

As reported earlier in the *Arctic Bulletin* (AB 1.02), ACAP, with AMAP, is co-ordinating a multilateral project on PCBs (polychlorinated biphenyls, persistent, toxic industrial chemicals that are found in many parts of the arctic environment) source inventory and clean-up in Russia. The project will now begin its implementation phase, involving as many as six pilot projects that will test destruction methods for PCB wastes and PCB-contaminated equipment.

Conservation of Arctic Flora and Fauna (CAFF)

http://www.caff.is/

CAFF is responsible for biodiversity issues under the Arctic Council, including monitoring, policy generation and conservation plans for circumpolar species. CAFF produced three major products during the Finnish chair of the Arctic Council: an excellent overview of the state of arctic biodiversity, *Arctic Flora and Fauna: Status and Conservation*; a set of policy recommendations for the arctic governments; and the ECORA project, a proposal to the Global Environment Facility for biodiversity conservation outside protected areas in the Russian Arctic. WWF contributed to all three products.

CAFF's recommendations to arctic governments are both general and broad. This makes them difficult to implement. In the Inari Declaration, Ministers acknowledged the recommendations as a "strategy" for conservation arctic biodiversity. What is needed now is a concrete, achievable, time-limited and funded plan for implementation of the strategy.

Emergency Preparedness, Protection and Response (EPPR)

http://eppr.arctic-council.org/

EPPR develops policy initiatives to protect the arctic environment from the accidental release of pollutants. EPPR's main product over the last two years is a series of maps showing biological resources at risk from oil spills. The underlying data sets are already out of date. Oil production and transport in the Arctic is likely to increase, and the maps will not be usable without regular updates.

Protection of the Arctic Marine Environment (PAME)

http://www.pame.is

PAME's mandate is to develop policy measures to prevent pollution of the arctic marine environment. Within PAME, the arctic countries spent much of the last two years arguing over whether and how to support the National Plan of Action for Protection of the Marine Environment from Anthropogenic Pollution in the Arctic Region of the Russian Federation (NPA Arctic).

Russia has now approved the NPA Arctic. In December 2001, the Global Environment Facility Council approved funding for an ambitious $30,000,000 USD project that incorporates elements of the NPA Arctic.

PAME also revised its guidelines for offshore oil and gas development in the Arctic, an activity in which WWF participated. Given the differences between regulatory regimes in the Arctic's oil-producing countries, it was difficult to find common standards. Nonetheless, it is disappointing that the standards are, in a few instances, weaker than those used in the Arctic's biggest oil producer, Norway, and potential future producers, the Faeroe Islands and Greenland.

Sustainable Development Working Group (SDWG)

SDWG lacks a strategic approach and as a result, includes a range of unconnected projects of varying quality. Some address critical development and environment issues (infrastructure, co-management of fisheries) without sufficient resources or mandate. Others proceed with important, concrete activities at a national and multilateral level (telemedicine, children and youth in the Arctic), but with little direct policy steering from the Council.

Two current SDWG projects have the potential to produce significant policy and field spinoffs: a project on cultural- and ecotourism (see p. 20), and a project on sustainable husbandry of reindeer and caribou (http://www.reindeer-husbandry.uit.no/). The latter produced a status report on circumpolar reindeer husbandry and a series of recommendations, and will now have a follow-up project on the interactions between wild and herded reindeer and caribou.

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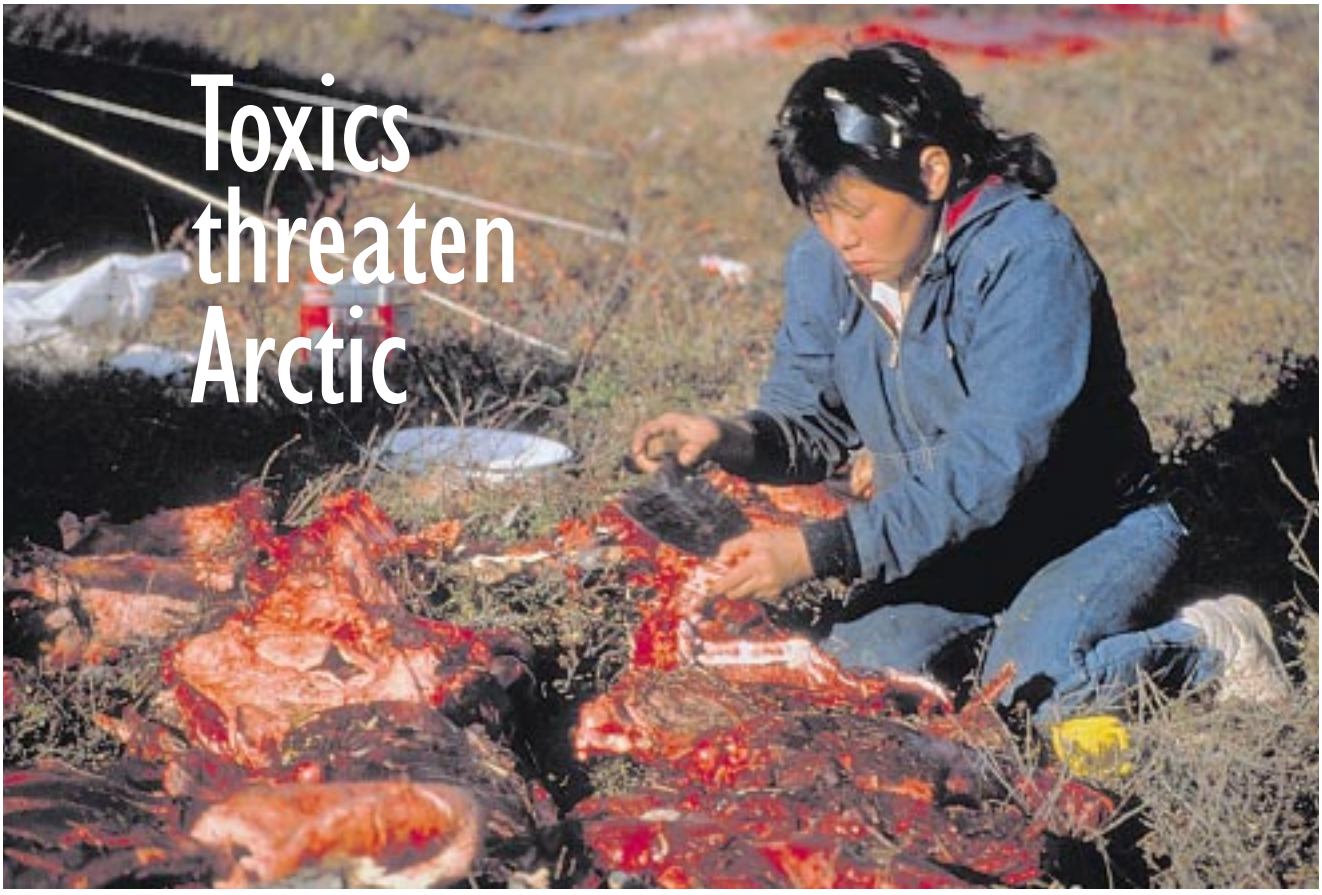
Toxics threaten Arctic



Toxic chemicals migrate to artic species and inhabitants.

Arctic wildlife and some arctic indigenous people, particularly Inuit, are being contaminated by industrial pollutants. These toxics include polychlorinated biphenyls (PCBs), pesticides and insecticides, according to the Arctic Monitoring and Assessment Programme's (AMAP) second report on pollution in the Arctic.

AMAP's report *Arctic Pollution 2002* demonstrates that Inuit in some communities in Greenland and Canada have among the world's highest exposures to certain toxic chemicals as a result of long-range transport.

The study also reveals that polar bears, arctic fox, seals, killer whales, harbour porpoises, and birds such as glaucous gulls and peregrine falcons are among the arctic species contaminated with the highest levels of persistent organic pollutants (POPs).

POPs are known to damage the nervous system, development and reproduction, and are able to travel great distances.

"Most of these chemicals come from outside the Arctic, including the southern hemisphere, and are carried to the Arctic by wind and water currents," said Samantha Smith, director of WWF's International Arctic Programme.

"Without a global ban, we can't protect indigenous peoples and wildlife in the Arctic. The US and Russia need to ratify the Stockholm Convention, which would ultimately eliminate 12 of the most dangereous chemicals."

Several other arctic rim countries, including Canada, Norway, and Sweden, have already ratified this important convention.

According to the report, arctic species with the highest levels of POPs are already showing adverse effects. For example, researchers have linked POPs levels to reduced immune system function, and increased rates of infection in polar bears and fur seals.

The Inuit Circumpolar Conference (ICC), which represents Inuit in Alaska, Canada, Greenland, and Russia, is also concerned by the report's finding. "Inuit call on all Arctic states to work together in global meetings to protect the health of Arctic residents, and to renew and expand scientific programmes on contaminant threats to the health and way of life of Inuit and other Arctic indigenous peoples," said Sheila Watt-Cloutier, ICC chair.

One of the alarming issues highlighted in the report is the increase in levels of organic mercury found in some parts of the Arctic. The trend is primarily due to increased burning of coal for energy production in south-east Asia, showing once again the tight links between the Arctic – as a recipient of pollutants – and the rest of the world.

The report was launched at the Second AMAP International Symposium on Environmental Pollution in the Arctic in Rovaniemi, Finland, from 1st to 4th October.

For more information on AMAP, see http://www.amap.no.

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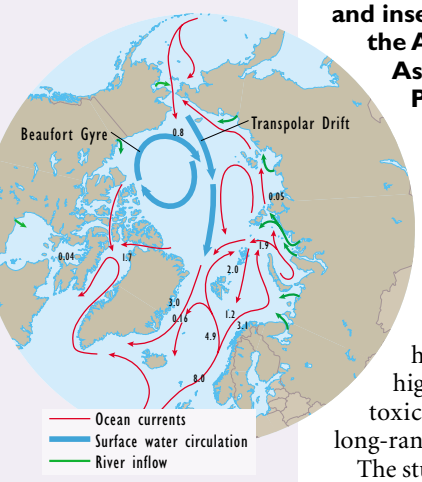
Pathways for contaminants

Rivers and ocean currents



Wind

Maps: AMAP 2002.
Arctic Pollution 2002.
Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway. xii + 112p.

Russia signs POPs convention

Russia has signed the Stockholm POPs Convention, a landmark treaty to phase out some of the most dangerous chemicals on Earth.

Marking the one-year anniversary of the introduction of the Stockholm Convention on persistent organic pollutants (POPs), Russia's decision to sign is a major step toward addressing the serious toxic pollution situation in that country.

"WWF, in joint effort with other NGOs and Russian experts, has worked hard to promote the Convention," said Alexey Kokorin, toxic project leader at WWF Russia. "At last we have succeeded in convincing officials that the Stockholm Convention is necessary for Russia. Phasing out these toxic chemicals is important not only for human health, but also for wildlife and ecosystems."

The Stockholm Convention on POPs, which requires ratification by 50 countries to take effect, would ban or severely restrict the production and use of 12 chemicals once implemented.

These include eight pesticides, as well as PCBs, DDT, and dioxins that can wreak havoc in human and animal tissue, damaging the nervous and immune systems and causing reproductive and developmental disorders and cancer.

As a heavily industrialized country and a major producer of organic chemicals, Russia faces a variety of threats from toxic contamination.

Photo: Trym Ivar Bergsmo

Polar bears and other mammals at the top of the food chain are vulnerable to toxic accumulation.

Huge volumes of DDT and other POPs were widely used for agricultural production in the 1960s–1980s and there are now approximately 20,000 metric tons of obsolete pesticides stockpiled in Russia.

Several thousands of units of outdated electric equipment filled with PCBs are now being destroyed without proper control. These problems require a significant amount of funding–money that is not available from the federal budget.

The Stockholm Convention provides unique possibilities to address the contamination issues with international assistance.

"This commitment by Russia to fight toxic chemicals is of particular importance for the fragile Arctic environment. Russia has the most industrial activity in the Arctic and is a significant source of dangerous chemicals to its own arctic territories and areas nearby," said Samantha Smith, Director of WWF's International Arctic Programme.

"The stage is now set for Russian and international efforts to clean up the POPs that are polluting Russia's Arctic, and WWF congratulates the Russian government on this step."

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WWF explores combined impact of climate change and toxics

Global climate change and environmental contaminants may come to impact virtually every ecosystem on the planet. The impacts of these environmental threats can be seen in regions far removed from the intensive industrial activity that causes them. This is especially true for impacts in the Arctic.

While the biological impacts of these stresses are being assessed in various scientific fora, there is a need for more research into their combined effects.

WWF's Climate Change Program has begun to explore the interactive effects of climate change and contaminants on biodiversity and human populations globally. One of its focal areas will be the Arctic.

Lara Hansen, senior scientist for the WWF's Climate Change Program, said: "We already know that persistent organic pollutants are accumulating throughout the Arctic, especially in top carnivores like polar bears, whales and seals. We also know that climate ➤

➤ change is already impacting arctic landscapes with shrinking ice extent, altered seasonal snow pack and melting permafrost.

"For species like polar bears which are dependent on a regular seasonal cycle of ice for feeding and migration, the combined stress of climate change and toxic pollution may pose an even larger threat than we currently understand. This is a case where the two factors – climate and toxics – must be assessed now if we hope to save this species in the future."

The combined effects of climate and toxics may also be impacting ecosystem processes. Climate change may alter air and water currents, thereby shifting the pathways of contaminants toward the Arctic. More assessment is needed of the risks associated with the release of contaminants currently sequestered in ice.

For those studying the toxicological action of contaminants, failure to include real world physical parameters such as temperature, full solar spectrum irradiance, and the changing nature of both can dramatically alter results. This scientific inadequacy can result in a misalignment of regulatory limits that in turn limit the success of long-term conservation efforts. From another perspective, failure to include future shifts in climatological processes can cause conservation strategies such as reserve design to fail when the required reserve components are no longer present.

WWF is developing this line of investigation with researchers at the US Environmental Protection Agency and is planning a workshop for 2003 to explore this subject. Its goals for the meeting include increasing awareness, developing and encouraging original research, and working with regulatory and conservation bodies to incorporate these ideas into their planning.

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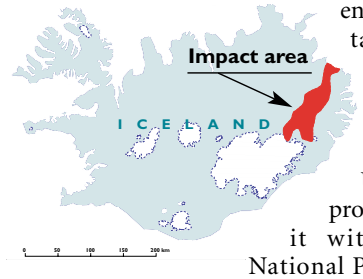
Alcoa moves ahead as

Aluminium giant Alcoa is set to forge ahead with plans to build an aluminium smelter in Eastern Iceland. This comes despite an international campaign against the project by WWF and the Iceland Nature Conservation Association (INCA), which, at its peak, saw the Alcoa CEO Alain Belda bombarded with thousands of emails protesting the environmental devastation the development will cause.



So far, Alcoa has committed around 4.5 million US dollars to the project, which will link it with the Icelandic National Power Company in the construction of the aluminium plant and giant hydropower dam complex in the environmentally-sensitive Eastern Highlands.

The MOU signed by Alcoa and the Icelandic government in July was described as a 'sustainable development' by the aluminium giant. The company was recently voted a component in the Dow Jones Sustainability Index. The MOU, which does not commit Alcoa to the project, seems destined to get the final go ahead, at an Alcoa board meeting in January 2003. The Icelandic government is likely to vote through the project this autumn despite significant domestic opposition.

The project will submerge parts of the Dimmugljufur canyon and breeding grounds for pink-footed geese (*Anser brachyrynchus*) and reindeer under a 57-kilometre square reservoir, and divert two major rivers in the area (see *Arctic Bulletin* 2.02).

Meanwhile the Thjorsarver wetlands in the central highlands of Iceland, a site registered for conservation under the Ramsar convention, are also once again under threat.

The Icelandic Planning Agency has endorsed plans for building a dam to increase hydroelectric power in the area.

The area is a hotspot for biodiversity. BirdLife International has recognized the Thjorsarver wetlands as an Important Bird Area, primarily because of its importance for the Pink-footed Goose. With 6–10,000 breeding pairs, the Thjorsarver wetlands support one of the largest breeding colonies of these birds in the world, and provide a moulting site after their summer migration. The wetlands are also an important breeding area for other tundra birds, including the Purple Sandpiper (*Calidris maritima*) and Red-necked Phalarope (*Phalaropus lobatus*).

Proposals to flood the Thjorsarver wetlands as part of further hydroelectric developments

Photo: Iceland Nature Conservation Association

Ramsar site faces new threat

go back more than 30 years. Landsvirkjun, Iceland's national power company, argues that its current development plans will affect only a minor part of the wetlands' vegetated area. It claims the scheme is the most economical hydroelectric development plan available if the company is to provide energy for an expanding aluminium smelter close to the country's capital, Reykjavik.

However, conservation groups such as WWF, Birdlife International and INCA are concerned by the loss of habitat for the Pink-footed Goose that the flooding will cause. In addition, there are fears that the reservoir will cause desertification as a consequence of erosion from riverbanks and changes in groundwater level.

Arni Finnsson from INCA said, "The irony is that the Icelandic government itself also recognizes the importance of the wetlands. In 1990, the government added a 37,500 hectare area to the List of Wetlands of International Importance (Ramsar List). This listing obliges the government to maintain the ecological character of the Thjorsarver wetlands – seemingly at odds with the plans of its own power company to flood the area.

"There are alternatives to further hydropower developments that could be used for the aluminium smelter, such as harnessing Iceland's geothermal energy. Indeed, the Ministry of Industry has explored possibilities for providing energy from other sources, and according to press reports from May last year, alternatives are available. "

For the dam to go ahead, the project must be accepted by the Nature Conservation Agency, local authorities, and the State Planning Agency.

For additional information, see http://www.inca.is.

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Dimmugljufur canyon in eastern Iceland will be partly submerged by the 57-kilometre square reservoir.

A green voice for the Arctic

An interview with Clifford Lincoln

Clifford Lincoln is a former Minister of the Environment for the province of Quebec, Canada, and the current Member of Parliament for the riding of Lac-Saint-Louis, Quebec. He is also the chair of the Standing Committee of Arctic Parliamentarians, an organisation of members of parliament from the arctic regions of the eight arctic countries. Throughout his 22-year career in government, he has been an impassioned advocate for the environment and the rights of indigenous peoples, and he has continued that role as chair of the Arctic Parliamentarians. **Samantha Smith**, director of WWF's International Arctic Programme, asked Clifford Lincoln about his views on the future of environmental protection and sustainable development in the Arctic.

Arctic Bulletin: *In 1992, the Canadian government committed to completing a network of representative protected areas in all of Canada's natural regions by 2000. In 1996, the Arctic Council committed to establishing a network of representative protected areas around the region. There has been insufficient progress towards either of these goals. How should civil society, including NGOs, get government to live up to these commitments?*

Clifford Lincoln: The current period of leadership transition is an ideal time for civil society to press the government to complete the network of protected areas in Canada's natural regions. Parks and wilderness area conservation have been earmarked as one of the key policy issues for the coming 18 months following the throne speech on September 30. We should all ensure the commitment is repeated and enforced in the throne speech.

AB: *Many were disappointed in the results of the World Summit on Sustainable Development, although Canada made major commitments to new protected areas and to the Kyoto Protocol. What is your view of the results of the Summit?*

CL: I attended the Summit on behalf of Arctic Parliamentarians. Perhaps the chief value of the Summit was to once again sensitize the world-at-large, especially the

cosy world of "have" nations such as our own, as to the urgency and primacy of the environmental cause – and that of the sustainable world society. From the point of view of environmentally-conscious Canadians, the Summit served as a key pressure point to confirm the coming ratification of Kyoto. However, this said, I think we should re-visit the formula of this huge type of summit and its all-encompassing agenda. Perhaps more focused international gatherings on clear-cut agendas (e.g. renewable energies) might produce more effective results and be harder for waffling countries to "escape" from, while saving face.

> We must find a new spirit and a new approach regarding development in the Arctic

AB: *The Arctic is facing a wave of development, particularly with respect to oil and gas resources. In Canada's Mackenzie River Valley and elsewhere, WWF advocates a principle we call "Conservation First". In areas with little development, this means identifying and protecting a network of key, representative areas before building major industrial developments. It requires a strong commitment from governments, as well as industry, communities and even NGOs. Do you think this approach will work, in Canada and other parts of the Arctic?*

CL: We must find a new spirit and a new approach regarding development in the Arctic. As it is, wayward development in other far less fragile regions and ecosystems has left its sad legacy. To use the same short-term methods in a hyper-fragile ecosystem such as the Arctic would bring about disastrous long-term results, not only for the Arctic itself, but also for the planetary ecosystem. Up to now, we have developed and then protected as almost an afterthought and exception. I agree we should reverse the process, and treat development after essential protection has been identified and achieved.

AB: *The August 11–13 Conference of the Standing Committee of Arctic Parliamentarians (SCAPR) resolved to support efforts of the Arctic Council to become a strong international body. Can the Arctic Council play a more meaningful role in environmental protection and sustainable development, either with respect to international policy or on the ground?*

CL: Arctic Parliamentarians strongly believe, and have since the inception of the Arctic Council, that the latter should be a fully-fledged international body, with a permanent secretariat and adequate autonomous funding provided by its member states. Most of the Arctic nations agree with this, but it requires total consensus, which cannot be

> We believe we can contribute best to the quality of life in the Arctic's indigenous peoples through credible, targeted, and useful initiatives

achieved at this time in the USA especially, believing that the Council should remain primarily a coordinating body for programs and projects. Parliamentarians will continue to press and voice their collective opinion, with the hopes that incrementally and with time, the international status of the Council may become at least a "de facto" if not strictly legalized, reality (to start with).

AB: *The Arctic Parliamentarians were instrumental in developing the Arctic Human Development Report (AHDR), a survey of the living conditions of arctic peoples. What concrete measures can be taken to better the lives of the Arctic's indigenous peoples?*

CL: The Arctic Parliamentarians have tried to concentrate on focused initiatives, which might bridge a policy, or socio-economic gap, liable to better the lives of the region's indigenous peoples. We are conscious we have no permanent resources, human or financial, to advance concrete projects. However, we try to identify and preface areas feasible of potential achievement by others with the capacity to implement them. The AHDR is a typical one. We prepared the initial work to the extent of making it a credible idea to present to the Arctic Council. Likewise, we are now working on an Information Technology Initiative pioneered by our Swedish colleagues, and we will endeavour to complete the "feasibility stage" so to speak, then try to convince a sponsoring agency to undertake it. Why not WWF?

We believe we can contribute best to the quality of life in the Arctic's indigenous peoples through credible, targeted, and useful initiatives such as these.

We are fortunate in that SCAPR is a tightly built, informal, flexible, committed and small gathering of people with no ego-base.

Magdalena Muir to head CAFF

The Conservation of Arctic Flora and Fauna (CAFF) working group under the Arctic Council confirmed its commitment to work actively, extensively and with a broad approach for the long-term conservation of arctic flora and fauna when it met at the ninth meeting of CAFF, held from 28–30 August at the International Scientific Research Station in Abisko, northern Sweden.

Snorri Baldursson and Magdalena Muir of CAFF.

The meeting also marked the exit of Snorri Baldursson as executive secretary of CAFF after six years of service. The incoming executive secretary, Magdalena Muir of Canada, also attended the meeting to take on her new position.

The CAFF work plan for 2002 – 2004 presented at the meeting, gained strong support from all member countries, permanent participants (indigenous peoples' groups), and observers, including WWF. A text was agreed upon for presentation at the Arctic Council Ministerial Meeting.

Stefan Norris, head of conservation with the WWF International Arctic Programme, said: "The overall objectives of CAFF harmonize well with the main goal of WWF in the Arctic: to preserve the region's biodiversity and ecosystems for future generations. As in the other Arctic Council working groups, the objectives and work plan activities of CAFF must be agreed upon through a consensus process involving all eight member countries as well as the permanent participants. WWF, which has observer status within CAFF, strives to be a pro-active and an agenda-setting environmental NGO within this context", he said.

"The degree of negotiations, compromising, and diplomacy necessary to move Arctic Council working groups forward can be frustrating. However, we must commend the chairpersons and country representatives for keeping the end goal in sight, and for actually achieving significant circum-arctic conservation successes through the Arctic Council channels."

Around 40 delegates in Abisko were presented with progress reports from the different projects and expert groups under CAFF, discussed the working group's recommendations and deliverables to the Ministerial Meeting, where work plans and mandates are endorsed, and finalized the work plan.

Projects reported on included the Arctic Climate Impact Assessment (ACIA), the Circumpolar Protected Areas Network (CPAN), the Integrated Ecosystem Management in Arctic Russia project (ECORA), as well reports from the expert groups on circum-arctic seabirds, arctic flora, and biodiversity monitoring in the Arctic.

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How green is Greenland?

Excessive harvesting of wildlife in Greenland for human consumption has put the country firmly in the international media spotlight. New laws to address some of the more urgent conservation problems associated with harvesting are now on their way.

The political debate about nature conservation in Greenland began with the publication of *A farewell to Greenland's nature* by journalist and writer Kjeld Hansen in 2001. The book was widely reviewed in the press in Greenland and Denmark and in the *Arctic Bulletin*.

Individuals and organisations around the world are following closely what happens in Greenland

A few months later, the book was translated into English and published in Europe and North America. Articles in *Newsweek* under the headline "Killing Inuit", and in *BBC Wildlife Magazine* under the headline "Grimland: how government subsidies and sustainable hunting are causing a wildlife holocaust," led to hundreds of angry e-mails and letters to the Greenland Government. The situation didn't improve when hunters killed a number of orcas in Disko Bay in March this year. More emails and letters arrived at the desks of politicians and civil servants in Nuuk. For the first time ever it became clear to Greenlanders that individuals and organisations around the world are following closely what happens in Greenland.

So was the international outrage justified? In the eyes of conservationists, clearly 'yes'.

Some species of birds are particularly at risk. So much so that then-Greenlandic minister of the environment Alfred Jakobsen promised new laws to conserve certain bird species. Jakobsen was true to his word: the Home Rule Government introduced new legalislation on bird conservation in 2001. The ramifications are still being felt.

Ten species under threat

Reading the articles in *Newsweek* and *BBC Wildlife Magazine* you might get the impression that all species in Greenland are suffering from over hunting. That is not the case. Greenland's Institute of Natural Resources in 2000 published a report *Status 2000* for the Greenland Home Rule Government focusing on the 40 species harvested in Greenland. The Institute concludes that ten species are in trouble. Five of the ten species need immediate attention and adequate data is available to form the basis of legal protection. These are Brünnich's guillemot, common eider, king eider, arctic tern and beluga. The Institute also highlights five species of marine mammals about which enough data is available to form the basis for legal protection, although more is needed. The five species are polar bear, narwhal, walrus, common seal and harbour porpoise.

The other 30 species harvested are not under threat from over-hunting –

Photo: WWF/UNEP/TOPHAM/Christophe Rougier

The beluga whale and the arctic tern are two species in Greenland that need immediate c vation attention.

Photo: WWF-Canon/KLEIN & HUBERT

Greenland National Park: Kong Oscar's Fjord Iceberg.

Photo: WWF-Canon/Oliver Langrand

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at least not based on available data. Seventeen species of birds, terrestrial and marine mammals are already included in regulations on hunting and four other species of seals are not in need of regulation. The status of two of the most economically important species is being followed closely: deep sea shrimp and Greenland halibut.

New laws under way

For several years Greenland has in fact been preparing new laws on conservation. Three initiatives are now on their way through the political system:

■ Legal notice on bird conservation came in to force on January 1, 2002. This notice means a shorter hunting season of between one and seven months for 18 species of birds – among them Brünnich's guillemot and common eider. The first species has declined some 50 per cent, the second 80 per cent.

The "Bird Notice" has met with massive resistance from hunters all over Greenland but most of all from North West Greenland where hunters are being particularly hard hit by the shorter hunting season.

There are only about 2500 professional hunters in Greenland but their political influence is enormous for political and historical reasons. Their weight on public opinion is even larger. This became very clear when the new Minister for the Environment, Edward Geisler, who took over from Alfred Jakobsen in January, had to give in after months of pressure and ease the new hunting regulations on Brünnich's guillemot and common eider, among other species.

In fact, the protests from the hunters and their organisation were so aggressive that it almost disrupted the political coalition behind the Government. The story doesn't end here: The proposal that eases the regulation should have come into force on August 1 but hasn't been published yet. In fact, the Government insists on seeing the edited version before it is sent to yet another hearing with stakeholders. The newly-established BirdLife International in Greenland, Timmiaq, has warned that any easing of regulations will be met with massive protests from bird enthusiasts from around the world.

■ A National Nature Conservation Law was sent out for consultation among stakeholders during May-June 2002. The new Act is seen as a framework law which should give Greenland the chance to implement the Ramsar Convention and decide on protected area measures. The law will be discussed and decided on this autumn.

■ New Notices of Law forms the ➤

➤ basis for quota setting on some of the marine mammals such as polar bear, narwhal, beluga and walrus. All notices have been sent out for consultation and are now ready for political decision

■ The Home Rule Parliament has, during its spring session, had an unusually high focus on nature conservation and sustainability. Inquiries about legal notices, laws and acts on birds, protection of nature, the National Park in Northeast Greenland and a proposal from the Government on a strategy on sustainable development in Greenland has dominated the spring session. The Standing Committee on Conservation and the Environment has submitted a report to the Parliament, which states that sustainability should be the basis for all regulations on bird hunting.

Two new initiatives

The massive protests and aggressive debate during the last eight months has made it completely clear to the Home Rule Government that passing laws in Parliament about hunting regulations is not enough to secure implementation. In other words – people don't follow laws they don't agree with. It has also become clear that control is not the solution. Greenland has only eight police officers dealing with hunting in a country with a landmass the size of Sweden and innumerable fjords and skerries.

The Government is aware that unless people understand and agree with the laws, these are not worth the paper they are written on. However, making people understand and agree with laws are not easy in Greenland. One reason for this may be that Greenland has gone from a traditional hunter-gather society to a highly developed industrial society in less than 100 years.

Another reason could be that hunting still is the most important economic activity for about 20 per cent of the population – most of which lives in the small settlements outside the major towns along the coast. Other than those few with administrative jobs, these people have little alternative to hunting and fishing. The settlements typically have a population of 50-200 persons.

The Government realised during its spring session that something had to be done, due to the many critical articles in international media, the mail and e-mail storm, fear of losing export and tourism income and the realisation that legal action with no possibility of control would have no positive effect. The result of governmental deliberations were two new initiatives:

■ An action plan for sustainable use of the living natural resources. A committee will develop the action plan with representatives from all stakeholders. Before the end of 2002, the committee must present "an integrated nature and hunting management plan plus targets, action plans and indicators for a sustainable utilisation of the natural living resources in Greenland".

■ An information campaign about sustainable use of the natural living resources aimed at the population in Greenland. The campaign will use all available media in Greenland – radio, TV, web sites and written material. The campaign also aims to create awareness through debate and dialogue at the national and local level and to involve all stakeholders in finding solutions to the problem of over hunting. The campaign is planned to run over two years and the economic support shown already from the economic sector – private as well as public – is impressive. As well, organisations such as the hunters and fishers organisation, KNAPK, Timmiaq and Uppik (conservation and environmental) are supporting the campaign.

The leader of the campaign is Tine Pars who states that sustainable use of living resources is the responsibility of everyone living in Greenland – not just of the politicians and the professional hunters and fishers.

By these decisions, the government has shown that it seriously wants to deal with the problems. However, as Greenland faces a parliamentary election this coming winter, things may change yet again. The coming year will be as dramatic for conservation in Greenland as the past few months.

JONNA ODGAARD,
freelance journalist

Protection act for Svalbard

The new Svalbard Environmental Protection Act sets out to preserve untouched Svalbard's landscape, flora, fauna and cultural heritage. For the first time, all environmental regulation for one area is collected in one act.

WWF welcomes this act, but believes important conservation opportunities were lost during negotiations on regulations for motorised traffic, tourism, industrial development, and management of marine resources.

Samantha Smith, director of WWF's International Arctic Programme, said: "The government didn't manage to translate progressive environmental principles into concrete and strict rules. As we know, the devil's in the detail, but we do commend the Norwegian government for enacting this comprehensive and precedent setting environmental law."

The legislation came into force on July 1st. It allows for environ-

Common guillemot.

Photo: Hallvard Strøm/Norwegian Polar Institute

Norway recog

■ Norway has recognised Bear Island as an important staging post for birds migrating to and from the Arctic, by creating a new nature reserve.

The reserve will encompass some 900 square kilometers of land and surrounding sea.

Bear Island is the southernmost island in the Svalbard archipelago. An isolated rock, about 175 square kilometers, in the middle of the biologically rich Barents Sea, and about half way between northern Norway and the rest of the Svalbard Islands, Bear Island is made up of rocky outcrops, steep cliffs and lowland wetlands.

Photo: Stefan Norris

Puffin.

mentally-sound settlements, research and commercial activities, and controlled and limited harvesting of species.

Under the Act, physical changes to the landscape and enterprises that may cause pollution must have special planning permission. In some cases, an environmental impact assessment will also be required.

The Act reverses existing regulations regarding off-road motor traffic. Snowmobiles are prohibited, but are permitted on certain areas and trails.

The Act provides special rights for residents regarding hunting, driving motor vehicles and using cabins.

"Svalbard is one of the last wilderness areas of Europe. Norway is both morally and legally obliged to protect this nature treasure, " said Minister of Environment Børge Brende.

"The Svalbard Environmental Protection Act provides a modern tool to meet the environmental challenges we face in this archipelago. My ambition is that also future generations will be able to experience the marvellous wilderness and the unique cultural heritage we have in Svalbard."

The Act is based on internationally recognized concepts, such as the precautionary principle, the principle to assess activity on the basis of overall pressure on the environment, and the principle that whoever is responsible for pressure on the environment should pay.

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nises Bear Island's importance

They are home to some of the world's largest colonies of common guillemots, kittiwakes and other sea birds, waders, shorebirds and geese.

Norway's environment minister Børge Brende said: "The nature reserve on Bear Island is an important step toward our national goal of preserving biodiversity and protecting representative aspects of Norwegian nature."

Brende said, however, that Bear Island's bird populations are being threatened by pollution in the sea and over fishing: "In developing a management plant for the Barents Sea, the Norwegian government will address these problems. The management plan will look further into the impacts of fisheries, petroleum activities, shipping and pollution from long distance transportation."

The isolated island with its distinct landscape and surrounding shoals, is unlike anything found on Svalbard's existing protected areas. It includes several areas of cultural significance which are virtually undisturbed.

Nature reserves give wilderness areas strict protection from activities that might change the environment. Fishing in a protected area is regulated by the Ministry of Fisheries.

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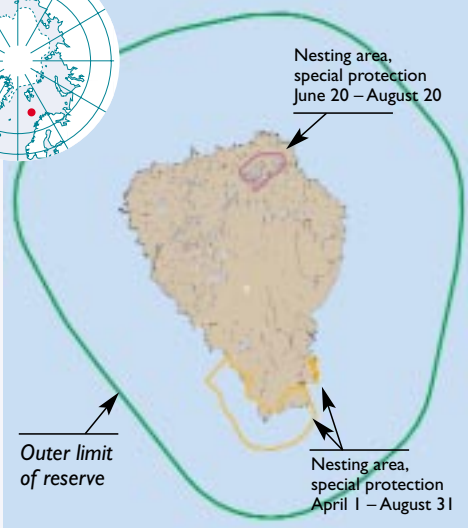

Norway funds polar climate research programme

The Norwegian government will fund a new arctic research programme. The work will monitor and predict climate change in the Norwegian arctic ocean and assess impacts on arctic marine biota.

Norway will also fund technological advances that are designed to improve scientists' ability to monitor arctic marine environments and improve climate and climate effects research in the Arctic.

This three-part programme called Polar Climate Research has a budget of 110-million Norwegian kroner (about US$14.8 million). The Norwegian Research Council (NFR) is reviewing grant applications to carry out studies for the programme this autumn and successful project applicants will start their research from 1 January 2003.

Photo: Kit & Christian, Norwegian Polar Institute

Harbour seal pup – soon to be weaned

The programme follows the success of Norway's first multidisciplinary climate project *Arctic Light and Heat* (ALV), which is now coming to a close.

ALV has contributed significantly to the understanding of the relationship between the climate system and the ecosystem in the Arctic. It made major advances in promoting interdisciplinary approaches to arctic research in the northwest Atlantic and it has identified significant knowledge gaps and research targets for the future.

The program's design encouraged cross-disciplinary interaction, between physical and biological sciences – something that has not been a tradition among Norway's small, typically discipline-fragmented research community.

Between 1996 and 2002, 32 research projects were conducted that included 11 PhD programs and three post-doctoral programs. Additionally, six communications projects helped to disseminate the knowledge gained in the program among and beyond the scientific community.

ALV projects analysed biological and geophysical data sets collected during the program-period along with previously collected data and long-time series. Atmosphere, sea ice, ocean, ocean atmosphere, heat transport, climate change and changes to patterns of circulation have been studied within various climate-oriented ALV projects.

Further, several studies in geophysical process dealt with snow and ice cover, deepwater formation, energy exchange between the land, atmosphere and sea, together with fine-scale modelling projects dealing with wind and snow drift as well as atmosphere, sea and ice.

A variety of ALV projects explored the effects of climate and solar radiation on organisms, populations and ecosystems. They studied physiological, behavioral and life-history adaptations in arctic organisms, in addition to exploring numerical dynamics directly in relation to specific climate parameters or broader climate-related indices such as the Arctic Oscillation (AO) or the North Atlantic Oscillation (NAO).

Several ALV projects specifically

Whaling vessels shed light on sea ice

The centuries-old logbooks of whaling vessels are providing new insights into the impacts of climate variation on sea ice in the Arctic.

Whaling captains and other early arctic explorers kept detailed journals during their voyages, describing the position of the sea ice, the weather, and information about the wildlife they caught.

Now scientists from the Norwegian Polar Institute and the Norwegian Meteorological Institute have used the entries in the logbooks to construct a historical sea ice chart data set.

WWF is funding the publication of the data on CD-rom to enable further research to take place.

Lynn Rosentrater, arctic climate change co-ordinator at the WWF International Arctic Programme said: "Much has been made in recent years of the connection between global warming and sea ice extent. But prior to the development of satellites few direct observations of sea ice were made in any systematic manner.

"These logbook observations, from as early as 1553, shed new light on the variability of sea ice in the Artic. For the past 100 years in particular, there are almost weekly reports from spring to autumn."

The data is important for developing models, calibrating satellites, and understanding climate variability in north-west Europe.

The CD-ROM will be available from February 2003 through the

Photo: Kit & Christian, Norwegian Polar Institute

addressed climate change effects on biodiversity within arctic terrestrial, freshwater and marine ecosystems. Feedback mechanisms and their effects, in the form of biological modifications of climate, have also been studied via investigations of microbial methane production in arctic tundra microbial soil processes and carbon fluxes in arctic oceans.

As well, birds (ptarmigan, kittiwakes, barnacle geese), mammals (harbour seals, polar bears, reindeer), fish (Svalbard charr), marine (a wide variety of predominantly benthic species), fresh-water (*Daphnia* spp.), and terrestrial invertebrates (spring-tails), land-plants, marine algae and soil bacteria have been research subjects within various climate-related contexts in ALV research projects.

ALV must be considered a success, given the budgetary constraints and the ground-breaking task of this interdisciplinary research initiative. It is also a nice launching point for NFR's new Polar Climate Research programme.

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Harbour seal haul-out near Prins Karl's Forland, Svalbard, Norway.

changes

International ACSYS/CliC Project Office in Tromsø, Norway. For further details contact Chad Dick, Director, International ACSYS/CliC Project Office, chad.dick@npolar.no

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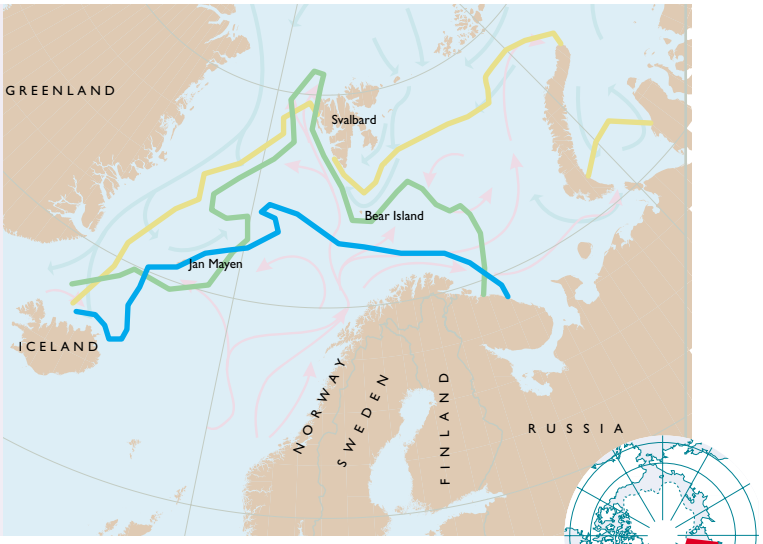
THE STUDY AREA with some ice edge observations. Extreme southern and northern April ice edge locations during the 20th century were observed in 1966 and in 1995. The extreme southern April extension during the 19th century was observed in 1866. Courtesy S. Østerhus.



Map: Norwegian Polar Institute

Senator Richard Lugar shows how easily a terrorist could hide and transport a nerve gas shell.

Arms control and environment: the future

Which is a greater threat to our environment: global warming or the two million nerve gas-filled artillery shells in Siberia, capable of killing around 150,000 human beings and countless animals and birds?

The answer is complex: these two questions are not mutually exclusive, yet that is how they are often debated.

One of the greatest problems in recent years is that experts in arms control and environmentalists seem to live on different planets. The languages of non-proliferation of weapons of mass destruction and sustainable development exist on different planes of human understanding, even though they are concerned with the same thing: the maintenance and preservation of our global environment.

However, in a surprise move, the G-8 reached an historic agreement at its annual summit this year in Canada. If implemented, it brings together global environmental concerns and the challenge of weapons of mass destruction.

With the unwieldy name of "10 Plus 10 Over 10," the Bush Administration pledged to spend US$10 billion over the next ten years – to be matched with another combined US$10 billion by Europe, Canada, Japan and others. The funds will be used to control, contain, eliminate and address the environmental ramifications of nuclear, biological and chemical agents that could be used as weapons of mass destruction.

This new global initiative is based on the success of the American Nunn-Lugar programs since the break-up of the Soviet Union in 1991. Named for Senators Sam Nunn, a Democrat from Georgia, and Richard G. Lugar, a Republican from Indiana, Nunn-Lugar has eliminated close to 6,000 nuclear warheads, thousands of missiles and launchers, and made Belarus, Ukraine and Kazakhstan nuclear-free states.

At the old Soviet arctic naval bases, hundreds of submarines have had their nuclear warhead tipped missiles and launchers removed. But the nuclear reactors inside these subs remain. Many of these old subs are slowly sinking, raising serious environmental risks from these reactors.

Norway, the United States and Russia initiated the Arctic Military Environmental Cooperative (AMEC) program to begin to deal with these issues. To date, the US has contributed US$25 million, Norway $9.9 million, and Russia $6.5 million on several projects dealing with the spent nuclear fuel including the development of a storage cask.

Earlier this year, the Bush Administration threatened to pull out of AMEC because of continuing tax and liability issues with the Russians. After Norwegian officials complained to Lugar, he convinced the State Department to change its position and remain involved in AMEC.

This decision and the G-8's agreement should help to expand AMEC and other programs related to the environmental consequences of disposition of weapons of mass destruction around the world.

Environmental organisations such as WWF and other major foundations and NGOs, along with international corporations, should join with the G-8 decision to take the successful Nunn-Lugar programs international. Public education and mobilization will be required to hold the G-8 countries to their commitment. (Every year Nunn and Lugar have had to fight to keep their program alive.) Environmentalists could also help enlist other nations to do as Norway and others have done to expand the G-8's $20-billion commitment.

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WSSD: World Summit of Shameful Deals

The World Summit on Sustainable Development was re-named the World Summit of Shameful Deals by WWF as the striking lack of political will and leadership became increasingly clear in Johannesburg between 26 August and 4 September. This historic summit failed dramatically to address the growing crisis for people and nature on this planet – including the Arctic.

Photo: WWF-Canon/Chris Marais

President Thabo Mbeki of South Africa at the WSSD.

The main outcomes of the Summit were two documents: the Plan of Implementation, which is a framework for implementing commitments made at the United Nations Conference on Environment and Development in Rio, 1992, and a brief Political Declaration. The shortcomings were more obvious. While most environment and development indicators have shown negative trends since Rio in 1992, the Johannesburg Summit failed to produce commitments that can reverse these trends. In fact, Johannesburg represents a step backwards in some respects, for instance in relation to adoption of the precautionary principle as a guiding principle in international environmental negotiations. The Political Declaration provides little more than general statements of good intentions, sadly reminding us of the lack of political agreement on issues essential for the future of life on this planet.

What went wrong?

Important questions are now being raised about the usefulness of mega-conferences with overloaded agendas. A distinct lack of focus on critical overarching global challenges, the pressures created by the current international difficulties, and a South African government extremely keen on seeing agreement on something, and apparently less concerned about what the agreement was about, greatly contributed to the failure of the Summit. Certain countries' deliberate efforts to prevent the Summit from agreeing on new targets and timetables added to the difficulties. The US and Australia were particularly destructive, frequently assisted by Canada, Japan and the G77, which represents a large group of developing countries.

Controversial issues

Some of the most controversial issues discussed at the Summit are highly relevant to the Arctic. These include natural resource degradation, declining fish stocks, loss of biodiversity, renewable energy, industrial subsidies, chemicals and health, trade, finance and globalisation, and the Kyoto Climate Protocol.

WWF is particularly disappointed that the Summit failed to secure support of a renewable energy agenda. Fossil fuel interests were strongly represented in Johannesburg, and effectively fought off opposing interests. The losers in this round of talks were biodiversity, animals and humans adapted to our current climate and ecosystems, as well as the two billion people without access to energy services.

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➤ The Summit failed to realise that the WTO-driven agenda for globalisation does not necessarily work in favour of the poor and the natural environment. Despite being a summit on sustainable development, governments did not address environmentally harmful subsidies in a meaningful way. On chemicals management, which is a vital environmental and human health issue in the Arctic, the Johannesburg agreement is weaker than existing commitments. This is also the case for natural resource management in general. On freshwater, important trans-boundary issues were blocked. Unlike the Rio Summit, no conventions were signed in Johannesburg.

On the positive side, WWF welcomes the sanitation target that aims to halve the proportion of people living without access to sanitation by 2015. Unfortunately, the target does not mention river basin management, which is fundamental in securing the water resources.

On marine issues and climate some achievements were made. The WSSD agreed on a target for replenishment of depleted fish stocks by 2015, and Canada and Russia – the two largest arctic nations – announced intentions to ratify the Kyoto Climate Treaty. Once Russia ratifies, the Treaty can enter into force. Canada's announcement is important as it signifies a split in the North American bloc.

What now?

Unfortunately the Summit outcome, which is based on consensus, reflects only the lowest environmental ambitions on each issue. However, a range of countries expressed significantly higher ambitions. WWF will now work together with these at both national and international levels to strengthen sustainable development programmes, and to promote solutions that can mitigate current flaws in the international system.

The functioning regional fora for arctic issues, such and the Arctic Council, will be key platforms from which we can attempt to achieve better results regionally than WSSD proved was possible internationally.

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Sustainable arctic tourism is "SMART"

The Arctic is increasingly drawing tourists to its pristine nature, large wilderness areas, and unique native cultures. Tourism is a rapidly growing industry in the Arctic, but as with tourism in other regions, there are both benefits and drawbacks.

Tourism can be a promising opportunity for economic development in small communities with limited options. It can also be a useful tool for educating visitors on unique arctic environment and arctic cultures, and promoting conservation. At the same time, although the industry is a relative newcomer to the region, there are already areas where large numbers of tourists or poor planning threaten to overwhelm ecosystems and small communities.

Recognizing these challenges and opportunities, a number of varied organizations have banded together and created a new program to work towards more sustainable tourism in the Arctic. Known as SMART (Sustainable Model for Arctic Regional Tourism), the program will offer assistance and incentives to improve on-the-ground business practices.

The SMART program is an official project of both the Northern Forum and the Sustainable Development Working Group (SDWG) of the Arctic Council. The United States and Finland, through the Alaska Department of Community and Economic Development and Kemi-Tornio Polytechnic respectively, are the lead partners. The SMART program also builds on the successes of the seven years of the WWF Linking Tourism and Conservation in the Arctic initiative.

In late June 2002, around 30 people from the eight Arctic nations gathered in Tornio, Finland to draft a final program description. Participants hailed from industry, trade associations, regional and national governments and environmental groups. Key organizations include: the Alaska Wilderness Recreation and Tourism Association (AWRTA), the Executive Committee for Northern Norway (Landsdelsutvalget), Swedish Ecotourism Association, Provincial Government of Lapland, the governments of the Northwest Territories and Nunavut (Canada), and the WWF International Arctic

Tourists are drawn to wilderness adventure.

Photo: Staffan Widstrand

Photo: Staffan Widstrand

Arctic wildlife attracts viewers: but is it sustainable tourism?

Programme. An earlier draft concept received the support of the Arctic Ecotourism Conference for the United Nation's International Year of Ecotourism (IYE) held in Hemavan, Sweden, and was one of the recommendations forwarded to the May 2002 World Ecotourism Summit in Quebec City, Canada.

Despite the diverse conditions across the Arctic, businesses have generally asked for three things: market incentives to reward good business practices, information on how to engage in better practices, and a network to learn from others in both formal and informal settings. To answer these needs the SMART program will offer both capacity building and business incentives. It will collect relevant information and experiences about sustainable tourism practices and translate and distribute the most helpful lessons, examples, and tools across the Arctic. To do so, the SMART program will rely on a variety of products, foremost among them a short training course, but potentially also handbooks, manuals, databases and other web-based support functions.

The other pillar of the SMART program will provide market incentives for businesses such as certification. Starting with the Principles and Codes of Conduct developed by arctic business operators, indigenous communities, academics, governments, and conservation groups in the process facilitated by the WWF, it will recognize operations that have reached a certain level of responsible practice. Certified businesses will be rewarded with a variety of benefits, including joint marketing and deals with tourism wholesalers. The SMART program will also educate consumers about sustainable tourism and guide them to certified tourism products.

To efficiently and cost-effectively deliver these benefits across the Arctic, the SMART program will rely on its network of regional tourism officials, trade associations, and other locally appropriate institutions. Because businesses and communities already seek assistance from these local organizations, they can provide a rapid assessment of the needs of a given business and direct them to the appropriate resources.

In the short term, the SMART partners will consult with a range of tourism businesses, governments, communities, indigenous peoples groups, and other interested parties to ensure that the benefits offered by the program will indeed meet the range of needs present across all of the Arctic. Over the long term, the partners foresee the SMART program becoming a non-profit organization that administers the certification program and offers capacity building resources in the Arctic. In this way, it is hoped that the SMART program will have a continued positive effect long after the initial project funding ceases. The SMART partners are currently seeking funding for the program.

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Photo: Staffan widstrand

How to meet the future? The use of guns and other technology and loss of traditional knowledge raises the issue of conservation in Nunavut.

How do you say "conservation"?

Finding an Inuktitut word for conservation was on the minds of workshop participants in Iqualuit, Nunavut, Canada this April. They gathered to begin defining conservation principles in Nunavut, and one of their tasks was to find a suitable Inuktitut term for this significant, but English word. Conservation has been an important concept for the Inuit for a long time, but translating the concept in a meaningful way was a daunting task.

The workshop was intended to be the first step in developing a framework for conservation based on Inuit knowledge, or Inuit Quajimajatuqangit. The 35 workshop participants were selected from Nunavut's three regions for their range of experience, age and knowledge. They discussed conservation based on their experiences with traditonal hunting techniques through to the use of snow machines, motor boats and high powered rifles.

Speakers included Joe Tigullaraq from the Government of Nunavut's Dept. of Sustainable Development. He discussed traditions and changes in hunting, as well as current issues in conservation. He noted the generation gap around issues such as increased hunting regulations, prioritizing jobs and schooling, use of guns and other technology and loss of traditional knowledge. Pete Ewins from WWF Canada also spoke on the international meaning and motivation for conservation, and highlighted some world examples of conservation successes and failures.

A summary document included the following recommendations: continue dialogue with the Nunavut Language Commissioner to arrive at an Inuktitut word for conservation; help prepare for a Conservation workshop in fall 2002 at the Nunavut Wildlife Symposium; and maintain a core working group to further define conservation targets consistent with Inuit culture and the Nunavut Land Claim Agreement.

Although yet to be formally finalized, the word "Nunguktitailimaniiq" was frequently used at the workshop to mean "Conservation" in translation. This word has been used before, but has some controversy: it translates as "not to finish," but many feel that Inuit have never intended to "finish off" a species of animals. Rather, they have had an idea of conservation since they arrived in the Arctic. Preserving and reinstating their time-honoured knowledge by uniting language and traditions with regulations will ensure the Inuit way of life, their traditional foods and their existence.

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Conservation workshop in Iqualuit, Nunavut, Canada.

Photo: L. White, WWF Canada

Forthcoming Arctic Meetings & Events

Title	Where	When	Contact
Conference: Ecosystem Dynamics At The Forest-Tundra Ecotone In Arctic Europe	Abisko, Sweden	8–9 November 2002	Abisko Naturvetenskapliga Station, SE-981 07, Abisko, Sweden, Ph: 46-980 400 21, Fax: 46-980 40171, E-mail: ans@kiruna.se, http://www.dur.ac.uk/DART/
Workshop: Land-Ocean Interactions In The Russian Arctic	Moscow, Russia	12–15 November 2002	Dr Vyacheslav Gordeev, P. P. Shirshov Institute of Oceanology, RAS, 36 Nakchimovsky Prospect, Moscow 117997, Russia, Ph: 7-095-1247737, Fax: 7-095 1245983, http://www.sio.rssi.ru/
Conference: Oil And Gas of Arctic Shelf 2002	Murmansk, Russia	13–15 November 2002	Arctic Shelf Association, 17 Jark Narx Street, Murmansk, 183025 Russia, Ph/Fax: 7-8152 453422, E-mail: arcticshelf@smng.murmansk.ru, http://www.arcticshelf.ru/index_eng.html
Workshop: Arctic Coastal Dynamics	Oslo, Norway	2–6 December 2002	Dr. Volker Rachold, Alfred Wegener Institute for Polar and Marine Research, PO BOX 120161, 27515 Bremerhaven, Germany, Ph: +49 471 4831 1202, Fax: +49 471 4831 1149
US Climate Change Science Programme: Planning Workshop for Scientists and Stakeholders	Washington DC, USA	December 3–5 2002	www.climatescience.gov/events/workshop2002
Open meetings of the Arctic System Science (ARCSS) Programme Principal Investigators and science steering committees	San Francisco, California, USA	December 4–5 2002	Lee Cooper, lcooper1@utk.edu, http://arctic.bio.utk.edu/#RAISE
Workshop: The Warming World: Designing for Climate Change	Anchorage, Alaska, USA	3–4 January 2003	University of Alaska Anchorage, School of Engineering, 3211 Providence Drive ENGR 201, Anchorage, AK, 99508-8096, Ph: 907-786-6430, Fax: 907-786-1079, E-mail: anbl@uaa.alaska.edu, http://www.engr.uaa.alaska.edu/wwdcc/default.htm
Conference: User Knowledge and Scientific Knowledge in Management	Reykjavik, Iceland	4–7 January, 2003	North Atlantic Marine Mammal Commission (NAMMCO) Secretariat, Polar Environmental Centre N-9296, Tromsø, Norway, Ph: +47/7775-0180, Fax: +47/7775-0181, Email: nammco-sec@nammco.no, http://www.nammco.no/
Conference: Snowchange – Northern Indigenous Views on Climate Change and Ecology	Murmansk, Russia	21–26 February, 2003	Snowchange Project, Teiskontie 33, P.O.Box 21, FIN-33521 Tampere, Finland, Ph: +358 (0)3 2647 111, Fax: +358 (0)3 2647 222, E-mail: tero@snowchange.org. http://www.snowchange.org/index.html
Conference: Arctic – Alpine Ecosystems and People in a Changing Environment	Tromsø, Norway	24 February – 1 March 2003	Norwegian Polar Institute, Fax: +47 7775, E-mail:ingrid.storhaug@npolar.no, http://www.npolar.no/ArcticAlpine2003/
Northern Contaminants Program Symposium on Contaminants in the Canadian Arctic	Ottawa, Canada	March 4–7 2003	Jennifer Baizana, baizanaj@inca.gc.ca, Ph: 1 819 953 8109, www.inac.gc.ca/ncp
10th Annual Alaska Ecotourism Conference	Girdwood, Alaska, USA	March 5–7, 2003	Alaska Wilderness Recreation and Tourism Association, http://www.awrta.org/conference03.html
Arctic Science Summit Week	Kiruna, Sweden	March 31 – April 4, 2003	Odd Rogne, iasc@iasc.no, http://www.iasc.no

Meeting and Event Information on the Web

- Arctic Council – http://www.arctic-council.org
- IASC – http://www.iasc.no
- Northern Forum – www.northernforum.org/events

WWF arctic staff

Glenda Koh began a six-month internship with WWF's Arctic Programme in September. She has a background in English literature and land use planning, and is interested in the relationship between planning, environmental assessment, and governance in general. While in Oslo, Glenda will primarily assist the WWF International Arctic Programme with its study of Strategic Environmental Assessment before returning home to Whitehorse, Yukon, in Canada's sub-arctic.

Glenda's internship is funded through the Canadian federal government, and is organized by the International Institute for Sustainable Development in partnership with the WWF International Arctic Programme.

WWF ARCTIC BULLETIN
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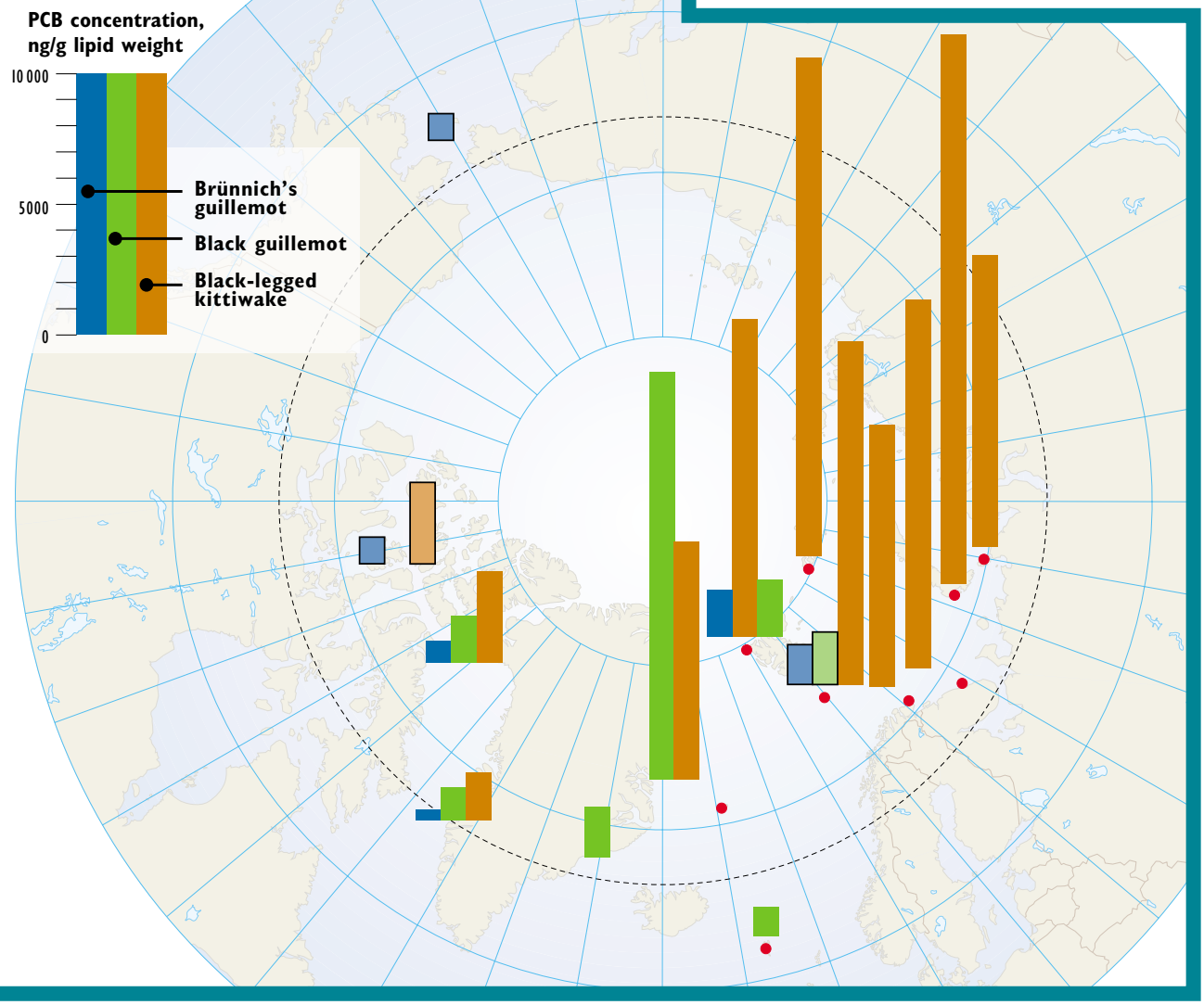
PCBs in marine birds

Concentrations of PCBs in liver and eggs (faded, outlined columns) of different species of marine birds.



AMAP 2002. *Arctic Pollution 2002*. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway xii + 112p.

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WWF is the world's largest and most experienced independent conservation organization, with almost five million supporters and a global network active in 90 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature. WWF continues to be known as World Wildlife Fund in Canada and the United States of America.

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