



# Arctic Bulletin



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## WWF Arctic Bulletin

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## Editorial

## Happy anniversary: ten years of WWF in Russia

AS WE GO TO PRESS, WWF has just celebrated ten years of official presence in Russia. From a small programme run out of an apartment in Moscow, WWF has grown into what is arguably Russia's foremost nature conservation organisation. WWF-Russia is now a national organisation with a distinguished board, seven field offices, paying members, more than 100 employees, and 62 projects throughout the country. Its staff is recognised by governments, industry and media for their scientific expertise and professionalism.

Though WWF's on-the-ground and policy achievements throughout Russia are significant, for this editorial I'll focus just on its conservation work in the Arctic. This began in 1989, before WWF even had an office in Russia.

My colleague Victor Nikiforov of WWF-Russia started WWF's first Russian field project. The project, on the Taimyr Peninsula, studied nesting habitats for the millions of migratory birds who come to the area each year.

WWF's goals in arctic Russia were simple but ambitious: to establish a network of protected areas; save rare species, such as the Siberian crane; and increase environmental awareness in local communities.

WWF's Russian arctic work was successful on a huge scale. WWF, with Victor in the lead, was involved in the creation of more than 30 new protected areas, totalling 30 million hectares. This is approximately the size of

Germany. Three of these protected areas were federal strict nature reserves, or zapovedniks, including the largest in Euroasia, the Great Arctic Reserve. For creating another 700,000 kilometer square protected area, the Sakha Republic received WWF's highest recognition, a Gift to the Earth, in a ceremony attended by then-WWF president Prince Phillip.

WWF also played a role in saving the population of the white Siberian crane in the Sakha Republic. Working with WWF, the regional government established the nature reserve Khitalik, which protected the key breeding area of this magnificent bird.

WWF's nature education clubs for children, the Friends of WWF, have brought outdoor activities and basic ecological training to more than 5000 children in the Russian north. I've visited some of these clubs myself, in Chukotka, and can testify to the engagement and enthusiasm of the children involved.

Finally, WWF established the biggest biological field station in the Russian Arctic, the Lena Nordenskiöld station in the Lena Delta. WWF has supported existing protected areas with purchases of equipment, uniforms, radios and transport. It has developed projects involving local people in conservation, as well as including traditional nature use zones in its proposals for protected area design.

With the current focus on Russian oil and politics, it's easy to forget Russia's tremendous contributions to biodiversity conservation. We shouldn't. Russia's unique system of federal strict nature reserves, the zapovedniks, as well as its numerous regional protected areas, represent globally outstanding protection regimes – on paper. Both systems are now woefully underfunded and plans for oil and gas development may also endanger their protected status. Let's hope that Russia's arctic future includes maintaining these great achievements.



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THE ARCTIC CLIMATE IMPACT ASSESSMENT, OR ACIA, is the first full-scale assessment of the current and projected impacts of climate change in the Arctic. ACIA will be released this fall and will show that climate impacts in the Arctic are already a fact – and are projected to increase dramatically unless global CO<sub>2</sub> emissions are significantly reduced.

In a previous issue of the Arctic Bulletin (4/03), we criticised the arctic countries for their inability to agree on the policy measures that were supposed to be a part of ACIA.

In this issue, we're happy to report that the arctic countries and indigenous peoples' organisations are again negotiating ACIA's policy component, with the goal of presenting it at the Arctic Council Ministerial on November 24, 2004. Much of the credit for getting the process going again goes to the Arctic Council chair, Iceland's Ambassador Gunnar Palsson.

WWF expects that the policy document will contain real commitments to reducing CO<sub>2</sub> emissions. Any other response to the evidence presented by ACIA would be a lack of leadership by arctic governments.

### INADEQUATE REVIEW FOR PROPOSED BATHURST INLET PORT IN NUNAVUT

■ Environmentalists in northern Canada are concerned over a proposed \$85-million port on Bathurst Inlet. The port will increase shipping through the Northwest Passage along both the Northwest Territories and the Inuvialuit Settlement Region on the Mackenzie Delta. The proposed project, which includes the port and a road, may also have adverse effects on the Bathurst caribou herd, which has been in decline in recent years.

### INVESTORS CALL ON CONOCOPHILLIPS TO STAY OUT OF ARCTIC REFUGE

■ More than nine percent of ConocoPhillips shareholders voted in favour of an Arctic Refuge shareholder resolution at the company's annual meeting on May 5, 2004 in Houston, Texas. The vote ensures that the Arctic Refuge resolution will be voted on again at next year's annual meeting. This is the first Arctic Refuge shareholder resolution ever filed with ConocoPhillips. A first-year resolution needs a minimum of 3.5 percent of the vote in order to be re-filed the following year. Last month BP announced that drilling in the Arctic Refuge is not part of its current business plan, and in 2002, BP dropped out of Arctic Power, the industry-funded lobbying group that lobbies in support of drilling in the Arctic Refuge. BP and ConocoPhillips are the two biggest oil companies operating on Alaska's North Slope.

### OIL INDUSTRY STAYS FOCUSED ON LOFOTEN

■ Norwegian oil company Statoil remains interested in the Lofoten Islands in northern Norway. The news follows the Norwegian Government's decision to postpone a final decision on whether to allow oil and gas exploration there last December after a campaign led by WWF. Statoil announced their plans at a meeting organised by the Norwegian Geologists Association in Tromsø. The Arctic is currently a major area of interest for oil companies.

# Polar bear study

Norway, Russia and Scotland join forces in August to calculate the number of polar bears in the Barents region.

Scientists will be studying bears on Svalbard, Franz Josef Land, and along the ice edge of the Barents Sea.

The project is led by the Norwegian Polar Institute and funded by the Norwegian Ministry of Environment, and will also involve researchers from the University of Oslo, VNIИ Priroda in Russia, and University of St Andrews in Scotland.

The Barents Sea polar bear population is unique in that no hunting takes place there. All other polar bear populations are subject to legal or illegal hunting to some extent. The Barents Sea population will serve as an important reference point for scientists studying the impact of hunting on other populations.

However there are other threats to polar bears in the

region, including high levels of pollutants which bioaccumulate in polar bears and the longer term impact of climate change.

To date no reliable estimate of the Barents Sea polar bear population has been available. Scientists believe that there are between 2000 to 7000 animals in the region.

The polar bear survey will be carried out by helicopter, one operating from Longyearbyen and a second operating from a research vessel in the areas between Svalbard and Franz Josef Land.

The polar bear population study will help scientists decide on the best way of ensuring the survival of polar bears. The survey will be the first in a series of surveys which will track population trends to warn about potential problems the animals might face.

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## New websites launched

WWF's Arctic Programme has re-launched two of its websites.

The Arctic Programme itself has a new website, and the Polar Bear Tracker has been re-launched.

The Arctic Programme website acts as a portal to the conservation work that WWF is doing across the Arctic. It includes links to all national offices and information on WWF conservation priorities.

Visitors can view and download press releases, publications, including the *Arctic Bulletin*, and the latest on toxics, climate change, tourism and other major issues affecting the Arctic.

There are plans to include a new section on the Barents Sea later this year.

Visitors to the Polar Bear Tracker website will be able to monitor the progress of polar bears as they move around the Svalbard archipelago. Since last November, the Tracker has been following the movements of two new bears, Samantha and Marianne.

You can find the new Arctic Programme website at [www.panda.org/arctic](http://www.panda.org/arctic), and the new Polar Bear Tracker at [www.panda.org/polarbears](http://www.panda.org/polarbears)

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Photo: Brynn &amp; Cherry Alexander

### INUIT CIRCUMPOLAR CONFERENCE HIGHLIGHTS CONNECTION BETWEEN TOXICS AND CLIMATE CHANGE

■ The Inuit living in the Arctic are being “poisoned from afar” as climate change takes its toll on the area and threatens their existence, the head of the Inuit Circumpolar Conference, said recently. Sheila Watt-Cloutier, chair of the group that represents about 155,000 Inuit in the arctic regions of Canada, Russia, Greenland and the US, said: “The Inuit have now become the net recipients of toxins coming from afar and we carry heavy body burdens in our blood core and the nursing milk of our mothers.”

### FISHERY TO GET CERTIFICATION

■ The Bering Sea/Aleutian Islands pollock fishery has been recommended for certification after an independent scientific study found it in compliance with the Marine Stewardship Council’s standards for a sustainable and well-managed fishery. Scott Burns, director of the WWF US Marine Conservation programme, said: “Today’s recommendation opens the door to public recognition of what’s right about a fishery and to public support for changes to lessen its impact on the marine environment.” Alaska’s pollock fishery is among the world’s most important suppliers of whitefish. Products from the fishery are sold by retailers and restaurants worldwide.

### SURPRISING PRESENCE OF FLAME RETARDANT CHEMICALS IN ARCTIC FISH

■ Researchers from Spanish and Norwegian universities have found concentrations of flame retardant chemicals, called polybrominated diphenyl ethers (PBDEs), in fish in 11 remote lakes in Northern Europe and Greenland. Anne-Marie Bjerg, from WWF Denmark, said: “Because of the prevailing winds Greenland is the recipient of pollution from North America, the Ruhr valley in Germany and even mainland China, so this pollution could have travelled thousands of kilometres”.

## Norway seeks whaling increase

The Norwegian Parliament recently announced its support for plans to increase the quota of minke whales taken each year from 670 to 1800.

WWF wants the Norwegian Government to re-consider the proposed quota and to continue to follow the guidance on quotas from the scientific committee of the International Whaling Commission.

The proposal to increase the quota of minke whale taken is based on the Norwegian Government’s Marine Mammal Policy White Paper. The Norwegian

Government believes the stock of minke whale in the North Atlantic is large enough to support the increase in the numbers harvested. It also believes that taking more whales will help increase fish stocks.

Rasmus Hansson, CEO of WWF-Norway, said: “The Norwegian Government has a well-founded reputation for supporting constructive international treaties and conventions across a broad range of areas. For it to act unilaterally on whaling is irresponsible and out-dated. They must seek a solution to this issue – as they do in the case of

fishing – through existing international fora. In this case that means following the guidance of the International Whaling Commission.”

He said that there was no scientific evidence to show that harvesting more whales would help fish stocks recover. “The big threat to dwindling fishstocks comes from over-fishing,” he said. “For example, the quota of cod which Norwegian fishermen are allowed to catch is almost 100,000 tonnes higher than that which scientists believe is sustainable.”

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## Call to prot

The Peary caribou and almost all populations of the beluga whale in Canada were assessed as 'at risk' by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) at their most recent meeting held in early May. For those populations listed as 'at risk', they can now be considered for listing and protection under Canada's new Federal Species at Risk Act (SARA).

The committee assesses the status of animals and plants in Canada that may be at risk of extinction. It released the results of its status assessments for the Peary caribou and the beluga whale and 34 other species on May 7th.

Six of Canada's seven populations of beluga whale live in the north and according to Dr Andrew Trites, a marine mammal specialist, COSEWIC believes that the only beluga population not at risk is in the eastern Beaufort sea. The Beaufort population is estimated at about 40,000 animals.

"The beluga population near Iqaluit has increased slightly although it's still at risk," said Trites.

The beluga population in Baffin Bay is declining mainly because of Greenlandic hunters.

"The hunting off Greenland has been as high as 1,000 animals per year. There's absolutely no way the population can sustain it," says Trites.

"On the Canadian side, the hunting is very low, very sustainable, but the real concern is what's happening off of Greenland and that hunt could well decimate the entire population."

The whales are also in

*Beluga, Delphinapterus leucas, Bering Sea.*

# Protect beluga and caribou in Canada

trouble in northern Quebec. “In Ungava Bay we think the population may have been hunted to extinction,” said Trites. “The other population that is endangered is in eastern Hudson Bay. Currently there are fewer than 2,500 animals, a decline of more than 50 percent since the 1980s.”

COSEWIC listed all Peary caribou populations as endangered. Committee chair Dr. Marco Festa-Bianchet said that over the past 20 years, science and traditional

knowledge show the number of Peary caribou has dropped by more than 70 percent.

According to Festa-Bianchet, if the trend continues, the caribou will disappear. “There’s relatively little hunting of Peary caribou that goes on. In many areas, there is no hunting at all, yet numbers continue to decline,” he said. “It could well have to do with global warming: they are very susceptible to ice storms that have been more frequent in the Arctic in the last few decades.”

Festa-Bianchet said the committee’s recommendations will now be forwarded to the Canadian government, and considered for legal protection under SARA. If they are accepted for listing under SARA, communities in the North will be consulted on ways to help protect the beluga whales and Peary caribou and help them increase in number.

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## Oil man takes WWF-Canada helm

An oil man is to be the new President and CEO of WWF-Canada.

An experienced private sector executive, Mike Russill will start work on August 1, 2004. Monte Hummel, the current President, will become President Emeritus and continue to spearhead WWF-Canada’s conservation work in the boreal forest and the Arctic.

“Mike brings management expertise with a strong sense of social responsibility to his work. This is an ideal fit for WWF-Canada’s solution-oriented approach to conservation,” said Biff Matthews, chairman of the WWF-Canada Board.

Russill has most recently been the Chairman of AADCO Automotive Inc., Canada’s leading environmentally-focussed automotive recycler and the only company of its kind to receive Environment Canada’s Eco-Logo. The balance of his career has been in the retail and marketing side of the oil and gas sector, working most recently for Suncor Energy Inc. While some might see this new role as inconsistent with his previous corporate life, Russill says “not so.”

“What appealed to me about the opportunity to join WWF-Canada was its effective approach to conservation issues,” says Russill. “There is so much yet to be done where the environment is concerned, I really wanted the opportunity to lead an

organisation that can bring all important stakeholders together.”

Russill already has a strong environmental track record. Until recently, he sat on the Board of the Nature Conservancy of Canada. He also played a key role in the Suncor Sustainability Task Force, tackling environmental and social responsibility issues, and was responsible for the introduction of ethanol-based fuels at Sunoco gas stations. Suncor Energy Inc. is a partner in the Canadian Boreal Forest Conservation Framework, a national vision for boreal forest conservation that WWF-Canada helped create.

“This is an exciting time for WWF-Canada,” says Biff Matthews. “We are currently working toward a significant change in some globally important, natural spaces in this country such as the Grand Banks, the Mackenzie Valley and the British Columbia coast.”

Monte Hummel was recently recognised for his conservation work by the *Canadian Geographic* magazine which awarded him their Canadian Environment Award - the *Citation of Lifetime Achievement*. The award is presented to those individuals who have shown exceptional lifelong dedication to environmental protection.

In a keynote address titled *Canada’s Geography: Doing Right by Our Birthright*, Monte urged Canadians, “Not to give your geog-

raphy away,” but instead, “Make it a top priority that is not for sale.”

To accomplish this, he emphasised WWF’s *Conservation First* principle, which calls on government and industry to give communities the chance to identify and protect areas that are important to them in advance of development. This is a principle WWF-Canada is



Photo: Linda Lee/WWF-Canada

currently supporting in the Northwest Territories’ Mackenzie Valley that Hummel called “A conservation line in the sand.”

“If this energy project, one of the largest in our history, is allowed to proceed without sequencing conservation first, it will set a terrible precedent for the long list of similar-scale developments waiting in the wings elsewhere in Canada, and the world.”

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Monte Hummel  
and Mike  
Russill.



Photo: WWF-Camer/Kevin Schaefer

Summer sunset over Bristol Bay from Round Island, Alaska.

# Conservatives try to sink US participation in law of the sea

For more than 20 years, Americans have been debating whether the United States should become a party to the United Nations Convention on the Law of the Sea (UNCLOS). Earlier this year, it appeared that the stars were properly aligned, and the US would indeed join 145 countries that are already party to the treaty. Now prospects for that happening this year have dimmed. Due to a small but loud group of conservative opinion leaders in this country, several senators in the US Congress asked Senate Majority Leader Bill Frist to put a hold on the bill and he has complied.

WWF and other conservation groups in the US are actively

supporting the treaty because it provides a concrete legal framework for the further development and implementation of effective measures for sustainable ocean use. In fact, the UNCLOS has broad support in the US, including from business and industry and the Bush Administration.

Senior officials from the Defense and State Departments have testified before Congress several times this year in support of US accession to the treaty. The White House, however, seems preoccupied with other matters and has not attempted to break the log jam on Capitol Hill.

Senate Foreign Relations Committee Chairman Richard

Lugar, an outspoken and tireless champion of US engagement in the Law of the Sea, has made a concerted effort to draw the debate to a close. In February, the 19 members of his panel unanimously gave their advice and consent for US accession. Additional hearings have been held since by the Armed Services and Environment and Public Works Committees. But the legislation is stymied by a combination of election year politics and, according to the Majority Leader, more pressing legislative business.

This spring, in a flurry of newspaper articles across the country, conservative opponents of the treaty raised concerns about the treaty's impact on US national security.

Steve Forbes, a conservative columnist and former Republican Presidential candidate in 2000, wrote in a recent column that “the treaty could impede what we do now because of ambiguous language concerning submarines and the gathering of military intelligence.” The Law of the Sea treaty “was designed to put the Earth’s oceans under the control of the UN”.

In a speech at the Brookings Institution in Washington in May, Senator Lugar sparred with critics of the treaty who also spoke at the event. He said, “Senate consideration of the treaty has been held up for more than two months by vague and sometimes fantastical concerns about the Convention’s effects. These concerns have been expressed primarily by those who oppose virtually any multilateral agreement. Many of the arguments they have made are patently untrue. Others are obsolete in that they attack the Convention as it existed in 1982.”

Lugar cited the support of General Richard Myers, Chairman

of the Joint Chiefs of Staff, who wrote in a letter to the Foreign Relations Committee: “The Convention remains a top national security priority. It supports efforts in the War on Terrorism by providing much-needed stability and operational maneuver space, codifying essential navigational and overflight freedoms.”

The board of directors of WWF in the US unanimously adopted a resolution in May urging Congress to act expeditiously in considering its constitutional “advice and consent” responsibility regarding ratification or accession to treaties.

The treaty would have substantial benefits for the United States, among them advancing the country’s global objectives in environmental protection and resource conservation. One of the treaty’s basic obligations is for all states to protect and preserve the marine environment and to conserve marine living species. The treaty sets standards and calls for establishing global and regional rules to

help govern the conservation, protection, and management of marine species.

The Convention comes open for amendment for the first time in November of this year. Proponents of US accession are pushing hard to make this a reality in time for full participation by the US at the upcoming meetings.

Senator Lugar puts an even finer point on the timing argument. He told the audience at Brookings, “the Convention’s Commission on the Limits of the Continental Shelf will soon begin making decisions on claims to continental shelf areas that could impact the United States’ own claims to the area and resources of our broad continental margin. Russia is already making excessive claims in the Arctic. Unless we are party to the Convention, we will not be able to protect our national interest in these discussions.”

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## Arctic threatened by flame retardant

Norwegian scientists have found the commonly used chemical deca-BDE (deca-brominated diphenyl ether) in polar bears and gulls on the remote arctic archipelago Svalbard. These findings, far from any known source, contradict previous industry claims that deca-BDE does not build up in humans and wildlife.

Polar bear samples analysed by the National Veterinary Institute in Oslo, and blood and eggs from glaucous gulls analysed by the Norwegian Polar Institute, were both found to contain deca-BDE. Deca-BDE has previously been found in falcons in Sweden, birds of prey in the United Kingdom, and in human blood samples tested by WWF in Europe.

“This is just more evidence that the chemical industry doesn’t know enough about the products it markets to consumers. The industry has insisted that deca-BDE doesn’t accumulate in the food chain. The fact that deca-BDE is in arctic wildlife shows that industry is wrong – again,” said Samantha

Smith, director of WWF’s Arctic Programme.

Deca-BDE is a poly-brominated chemical which is used as a flame retardant, and commonly used in consumer items such as computers, televisions, furniture cushions, car upholstery, building insulation and some children’s clothing to make them less flammable. Deca-BDE is one of the most widely used brominated flame retardants in the world.

WWF is concerned about the link between chemicals like deca-BDE (ie those that are very persistent, bioaccumulative and travel long-distances) and major health issues such as reproductive problems, effects on the immune system, effects on the nervous system and on behaviour, adverse effects on foetal development, and possibly cancer. A European ban is to be introduced on two related flame retardants (penta and octa) later this year, due to their persistence and increasing levels of contamination in people and wildlife around the world and due to their potential toxic effects. Although little is known about

whether deca-BDE is as toxic as these other brominated flame retardants, the fact that it travels long distances, accumulates in wildlife and potentially breaks down into other harmful compounds, is in WWF’s view enough to justify a ban.

EU governments recently met in Dublin to discuss the risk assessment of deca-BDE and concluded no additional legislation was needed to protect human and environmental health. This proposal would not lead to the phase out and eventual ban of deca-BDE. WWF believes this is unacceptable. “WWF has demonstrated that deca is contaminating our bodies (WWF Chemical Check Up report) – and we now know it to be contaminating polar bears and other wildlife too. WWF wants to see a rapid phase out of this pervasive pollutant – deca must be replaced with safer alternatives,” says Dr Michael Warhurst of WWF’s European Policy Office.

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# SAOs meet in Iceland

Senior representatives of the arctic nations, along with Permanent Participants representing the indigenous peoples of the North, and official observers, such as WWF, gathered in Selfoss, Iceland in May for a Senior Arctic Officials (SAO) meeting of the Arctic Council.

The gathering was one of the last major meetings of the SAOs before the Arctic Council Ministerial in Iceland in November.

Major items on the agenda included the Arctic Climate Impact Assessment, the AMAP oil and gas assessment, the Arctic Human Development Report and the funding of Permanent Participants and Arctic Council Projects.

## AMAP Oil and Gas assessment

The Arctic Monitoring and Assessment Programme (AMAP) is preparing a report on the impacts of oil and gas activities in the Arctic.

The assessment will be completed in 2006 and will cover the social and economic consequences, the environmental impacts from pollution, the environmental effects from physical impacts and disturbances and the effects on human health.

Of particular interest to the Permanent Participants of the Arctic Council is the focus on the social and economic consequences and the sustainable development implications of oil and gas activities. This aspect was not originally covered in AMAP's 1997 *State of the Arctic Environment Report*.

From the assessment, a set of recommendations will be presented to the Arctic Council as suggestions for improving the implementation of oil and gas activities in the Arctic.

## Arctic Human Development Report

The Arctic Human Development Report will be the first comprehensive study of human conditions around the entire circumpolar region. The report will focus on the human dimensions of sustainable

development in the Arctic and will include topics such as politics, culture, human health, gender issues, the speed of social change, and international cooperation.

The work will bring together existing research results, which will then be combined with work by recognised social scientists. To date, much of the work that has been initiated by the Council has been rooted in the physical sciences. This is the first substantial project that the Council has developed that focuses on the social sciences.

This report has been a priority for the Icelandic chairmanship of

the Council. It will be released at the Arctic Council Ministerial meeting in November, 2004.

## Funding the Permanent Participants

A major challenge for the Arctic Council has been the difficulty in finding sufficient funds to support the participation of the representatives of the arctic indigenous groups (Permanent Participants).

Two suggestions for financing their participation are to set up core funding for indigenous peoples' activities, and to have all Arctic Council projects dedicate a part of

## Latest on ACIA

Interest in the most significant report on climate change in the Arctic ever produced by the Arctic Council is hotting up.

Dr Robert Correll, chair of the Arctic Climate Impact Assessment (ACIA), gave a presentation on the preliminary findings of the Assessment to the Arctic Council, during the Senior Arctic officials meeting in May. The findings of the Assessment paint a potentially dire picture for people and wildlife in the Arctic.

As well as presenting the science in the Assessment, Dr Correll outlined the effects that rising temperatures in the Arctic will have. These include a loss of biodiversity, as animals that rely on sea ice for survival decline, the threat to cultural survival and way of life for many arctic indigenous communities, and the opening up of previously frozen shipping passages.

In a recent joint interview with international news agency Reuters, Dr Correll and Samantha Smith, director of the WWF Arctic Programme, outlined the importance of the assessment. "There is dramatic

climate change happening in the Arctic right now and it's taking place at about two to three times the pace of the rest of the globe," said Dr Correll.

"The ACIA report underlines how critical it is that we take action as soon as possible, first under Kyoto, to reduce emissions and invest in renewable energy," said Smith.

The assessment will be launched in the autumn and will include a scientific document, a summary document and policy recommendations.

Although it seemed likely that the US might try to block the creation of a policy document, the Arctic Council SAOs met in Nuuk, Greenland in April and were able to confirm their original plans for a policy paper.

The ACIA report is set to be a benchmark for climate change across the rest of the world. Dr Correll said: "If you want to know what the rest of the planet is going to see in next generation, watch out for the Arctic in the next five to ten years."

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their budget to indigenous peoples' involvement. To date, SAOs have not decided which route to follow.

### Funding Arctic Council projects

As a way to support Arctic Council projects Harro Pitkanen, managing director of the Nordic Environment Finance Corporation (NEFCO) outlined the concept of a Project Support Fund (PSF). Arctic countries will be able to voluntarily contribute funds to the PSF, which can then be accessed by the Arctic Council for financing projects.

Most member states were in favour of such a mechanism, although some expressed concerns about the possible affect that it might have on the way the Arctic Council decides on and develops projects. In particular, the US were concerned that the PSF might alter the way decisions are made about Arctic Council projects, by giving more power to those countries that contribute to the PSF.

Gunnar Pálsson, Chairman of Senior Arctic Officials, assured members that the consensus procedure of the Arctic Council would be maintained. Discussions will continue before a proposal is drafted.

### November Ministerial meeting

This November the ministers of the Arctic Council will come together in Iceland for their biennial meeting. At the Ministerial, the Arctic Council will be delivering results from their work over the last two years.

The Arctic Climate Impact Assessment and the Arctic Human Development Report will be two such deliverables. The policy recommendations from these reports may then form the basis of future decisions made by arctic countries.

The Ministerial meeting will also see the chairmanship of the Arctic Council pass from Iceland to Russia.

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■ The Arctic Council is a high level inter-governmental forum that includes the eight arctic countries, organisations representing indigenous peoples of the Arctic, and observers, including WWF. The Senior Arctic Officials (SAOs) meet twice a year to monitor the ongoing work of the Arctic Council and make recommendations to Arctic Council ministers.



Photo: Bryan and Cherry Alexander

**A gas drilling rig on the tundra near Bovanenkovo, Yamal, Siberia, Russia.**

## Spitsbergen nature at risk from oil drilling

Russia has said it plans to test drill for oil in a fjord on Spitsbergen.

Spitsbergen falls under Norwegian sovereignty, but Russia has historical claims to drill for oil in Billefjorden in the centre of the arctic island because it once operated coal-mining operations in the same area.

WWF has criticised Norway for allowing the Russians to go ahead with drilling this autumn despite continued claims that they want Svalbard, which includes Spitsbergen, to be one of the best-protected wilderness areas in the world.

The drilling site – a biologically rich and vulnerable area – is home to polar bears, ringed seals, arctic fox, rare plants, and tens of thousands of sea birds.

Spitsbergen was recently given higher levels of protection by the Norwegian government, with new protected areas on land and at sea, including areas directly around Billefjorden where the oil drilling will take place.

Samantha Smith, director of WWF's Arctic Programme, said: "Oil operations, and the potential for an oil spill, would have devastating repercussions for all wildlife in the central fjord system and along the west coast of Svalbard, including the new protected areas.

"Such operations would also be damaging for the cruise tourism industry, which takes around 30,000 tourists from all over the world each summer up and down the west coast of Spitsbergen to enjoy arctic wildlife. Spitsbergen's environment is not a Norwegian issue, it's a global issue. The island should be protected completely."

WWF is calling on the Norwegian government to ban drilling for oil in the Svalbard archipelago (including Spitsbergen). The conservation organisation wants Russia to invest in tourism and scientific research instead.

Julian Woolford,  
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# Connecting the North

For the past five years, young people from around the North have been working with northern organisations as part of the Arctic Council International Internship Programme (ACIIP), a pilot project initiated by the Arctic Council under its Future of Children and Youth of the Arctic programme.

To date the strongest support for the project has come from Canada where the International Institute

for Sustainable Development (IISD) in Winnipeg has been coordinating internships for young Canadians.

Now, IISD, Future of

Children and Youth of the Arctic, the Centre for International Mobility, and the University of the Arctic are working on the development of an International Circumpolar young leaders programme based on the model of the pilot internship programme for northern Canadians.

The programme will enable a minimum of two youths from each circumpolar country to spend up to six months with an organisation in another circumpolar country working on northern issues.

They will undergo a one-week online training course that will cover topics in northern sustainable development, the workings of the Arctic Council, cross-cultural communications and leadership

skills. The curriculum will include case studies, problem-solving exercises and assignments.

To date, 20 northern youths have participated in this programme (18 Canadian participants; one Finnish participant; and one Russian participant). They were placed with the following host organisations: WWF Arctic Programme; University of the Arctic; the Northern Forum; Arctic Research Consortium of the U.S.; the Global Resource Information Database (UNEP-GRID); and the Indigenous Peoples' Secretariat.

Two northern Canadian interns, Paula Anderson from Fort Smith, and Kirk Tyler from Whitehorse have been very positive about their internship experiences.

"My placement has opened doors to the circumpolar North, and networking has shown me how small the North can be, even though it covers so much space. Having access to information and people in the Arctic has been invaluable," said Anderson, who is working with the Indigenous People's Secretariat in Copenhagen, Denmark.

Tyler, who is based at the University of the Arctic in Rovaniemi, Finland agrees.

"This opportunity to work internationally in the North has provided me with the ability to develop my professional skills and has exposed me to a northern-focused organization. Having the ability to experience another part of the North and a different culture will provide me with a renewed and

fresh perspective when I return home."

There are now efforts to increase participation in the internship programme by the other arctic countries. So far the main problem has been lack of funding from agencies in these countries. Eventually the Arctic Council's Future of Children and Youth of the Arctic programme hopes to have interns from Norway, Sweden, US, Denmark and Iceland as well as the current participants all gaining valuable work experience around the circumpolar north.

Outi Snellman, head of the International Secretariat for the University of the Arctic, has been working with interns since the programme began.

"We are a very small and evolving organization, and we always work as a team. Young interns who provide a fresh perspective invariably bring something new to the team. That is why we try not to have too clear-cut job descriptions for our interns, but rather try to involve them in areas where they have real strengths and can contribute. For me personally, however, it is most rewarding to watch an intern grow into areas that initially were real weaknesses. This really is what makes working with interns such a dynamic process: in the end, you always gain so much more than just another worker."

For more information about the programme, contact Carolee Buckler, IISD Project Manager, [cbuckler@iisd.ca](mailto:cbuckler@iisd.ca)

Nigel Allan, [nallan@wwf.no](mailto:nallan@wwf.no)



Arctic Council interns during briefing in Winnipeg, Canada.

Photo: Nigel Allan

## New WWF tourism grants

WWF has re-launched its Arctic Award for Linking Tourism and Conservation as a small grant scheme.

By introducing the new format for the Award, WWF hopes to support concrete practical projects that demonstrate, create or improve the contributions of tourism towards nature conservation in the Arctic.

Eligible applicants are arctic tourism businesses and multi-

stakeholder project groups. Through the small grant scheme WWF wants to provide start-up funding to small and effective measures which can establish and improve links between tourism and arctic conservation.

The new scheme was announced in April when WWF presented Svalbard Villmarkssenter with the final Arctic Award for Linking Tourism and Conservation for their long-time efforts in promoting non-motorized transport on

Svalbard and overall environmental education and awareness programmes for their guests.

The first WWF Arctic Tourism and Conservation grants will be awarded in November. The deadline for application is October 1st 2004.

For further information, contact Miriam Geitz at WWF's Arctic Programme, or visit our website, [www.panda.org/arctic](http://www.panda.org/arctic).

Miriam Geitz, [mgeitz@wwf.no](mailto:mgeitz@wwf.no)



# The Barents Sea Ecoregion EUROPE'S LAST WILD SEA

The Barents Sea is one of the most productive marine ecosystems in the world and among the most biologically diverse in the Arctic. It is Europe's last large, clean and relatively undisturbed marine ecosystem.

Its cold but shallow waters teem with life. It is home to some of the world's largest fish stocks, seabird colonies and spectacular coral reefs.

There are also important populations of whales, polar bears, walrus and seals.

The peoples of the Barents region are diverse, with a multitude of cultures, languages and histories. The biological diversity and production of the marine

ecosystem has always been the basis for survival for those living in the region.

Even today the commercial fisheries are a main source of jobs and income for local communities.

The Barents Sea Ecoregion now stands at a crossroads most other regions passed decades ago. While economic development will continue to drive increased demands on the Barents Sea's limited resources, we can still choose to move forward sustainably in this region.

The Barents Sea Ecoregion is one of WWF's highest priorities due to its pure and vulnerable environment and high productivity. Join us to safeguard the biodiversity and beauty of Europe's last wild sea for future generations.



Photo: Bjørn Franzen



Photo: WWF, Canon, Morten Lindhørd



Photo: Bryan & Cherry Alexander



Photo: Tore Larsen



Photo: WWF, Jan Van de Kam



Photo: Bjørn Gullken



# PRIORITY AREAS FOR CONSERVATION

In order to protect the natural values of the Barents Sea we need to know which values it contains and where they can be found. WWF has, together with leading experts from management agencies and research institutes, identified conservation priorities within the Barents Sea Ecoregion.

The map below highlights the priority areas for biodiversity conservation in the Barents Sea. The priority areas have been selected on the basis of representative or unique habitat types and the occurrence of important ecological processes and phenomena.

## Sperm whales.

Photo: WWF-Canon; Hal Whitehead

## Mammals of the Barents Sea

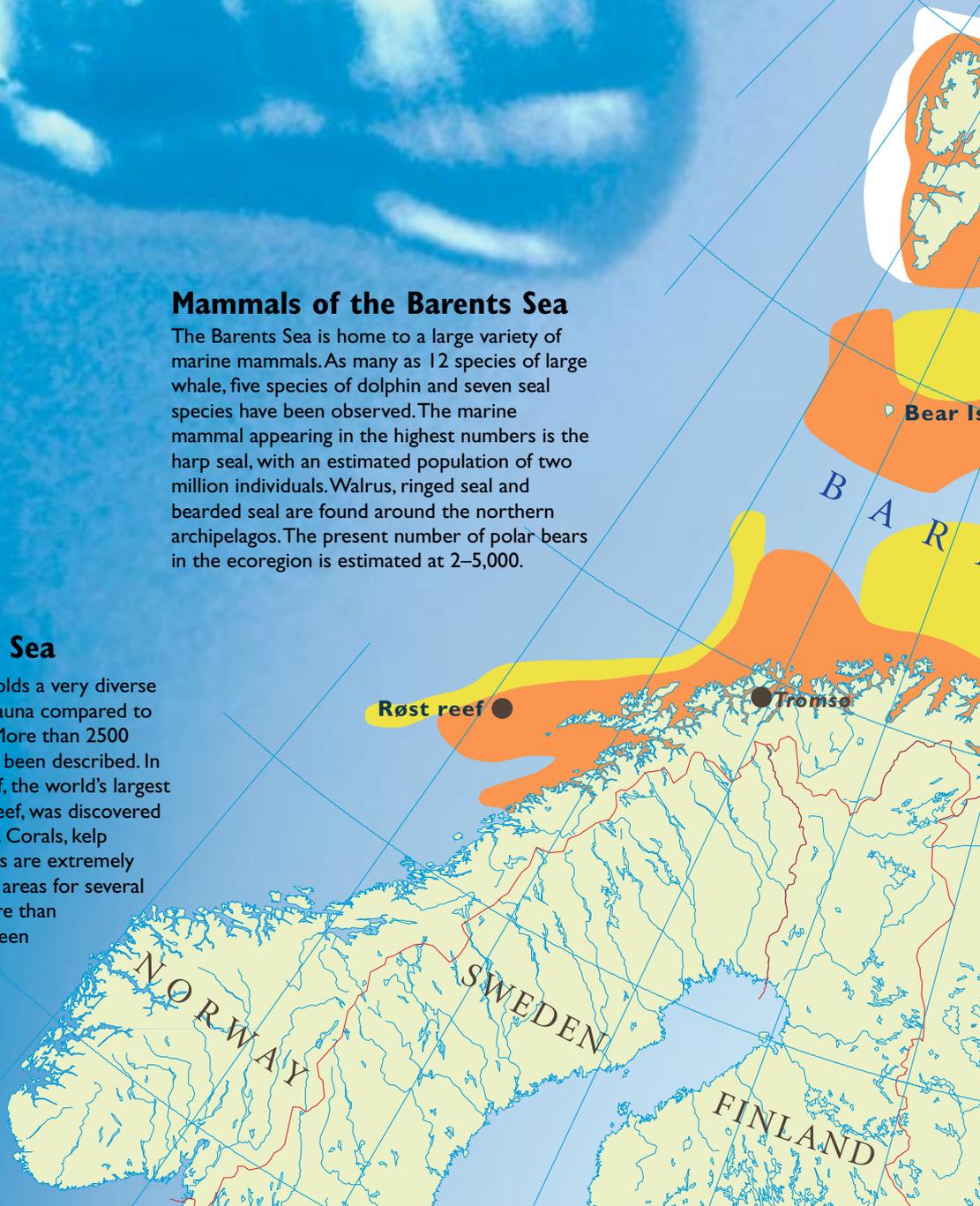
The Barents Sea is home to a large variety of marine mammals. As many as 12 species of large whale, five species of dolphin and seven seal species have been observed. The marine mammal appearing in the highest numbers is the harp seal, with an estimated population of two million individuals. Walrus, ringed seal and bearded seal are found around the northern archipelagos. The present number of polar bears in the ecoregion is estimated at 2–5,000.

## Benthos of the Barents Sea

The Barents Sea holds a very diverse benthic flora and fauna compared to other arctic seas. More than 2500 species have so far been described. In 2002, the Røst reef, the world's largest cold-water coral reef, was discovered outside of Lofoten. Corals, kelp forests and sponges are extremely important nursery areas for several species of fish. More than 600 species have been observed around a single coral reef.

Photo: Erling Swarren

Lophelia reef.



# ATION

Herring.

## Fish of the Barents Sea

The Barents Sea holds huge fish stocks, including the world's largest cod stock. There are more than 150 fish species of 52 families in the ecoregion. Some fish, like cod, herring and capelin, are migratory and use large parts of the Barents Sea during their life cycle. Others, like redfish and Greenland halibut, are stationary. Along the southern coasts, world-class salmon rivers run down to the sea.

Photo: Erling Swensten



## Birds of the Barents Sea

The Barents Sea has one of the largest aggregations of seabirds in the world. In the summer there are more than 20 million birds in the region. More than 40 species breed along the coasts of the Barents Sea, many in spectacular colonies housing millions of birds in the breeding season. The largest colonies are found on the west coast of Svalbard, on Bjørnøya, and along the north Norwegian coast. Most common are kittiwake, Brünnich's guillemot, little auk and puffin.

Puffin



Photo: WWF-Cannon Mitchell D. Pratz



# GROWING THREATS TO BIODIVERSITY IN A REGION OF CHANGE

Each day the impacts of human activities are reaching more remote areas of the world. Growth and expansion of industrial activity and resource exploitation are increasingly threatening to undermine the very basis for biological diversity and production in the Barents Sea. The major threats to biodiversity include:

## Oil and gas development

Development of the large oil and gas deposits in the Barents Sea will lead to pollution and increased risks of large oil spills. This will have impacts on the ecosystem and cause changes in the way of life of indigenous peoples and local communities.

## Over-fishing

Today, intensive fishing has great impact on the marine ecosystem. Over-fishing has led to changes in the marine food webs and a decline in the abundance and distribution of species.



Photo: Fiskebrødremses forbund

## Nuclear waste

The ecoregion has the world's highest density of nuclear reactors, many of them inside rusting submarines. So far high levels of radioactivity have not been recorded in the Barents Sea, but it remains a threat.

## Climate change

Global warming will cause large changes in the Barents Sea in the coming decades. Much of the sea ice will disappear and some species are likely to become extinct.

## Toxic chemicals

Parts of the region show very high levels of persistent organic pollutants (POPs) and heavy metals. Most of these are transported to the region by ocean currents, winds and rivers.

## Introduced species

An increasing number of alien species, such as the king crab, have been introduced to the ecoregion and are already causing severe impacts on the ecosystem.

## Shipping

Shipping activities, and impacts such as spills and discharges of chemicals, are expected to increase dramatically due to the opening of new sea routes, and increased transportation of oil from fields further east.

## Aquaculture

The aquaculture industry is expected to grow rapidly on both the Norwegian and Russian sides of the Barents Sea, carrying with it challenges such as escaped farmed salmon and parasites.



Photo: Natur og Ungdom

Photo: WWF-Norway, Maren Esmark

## WWF's vision

WWF's vision for the Barents Sea is to safeguard, for all future generations, a sea with rich, diverse and productive nature that supports the natural processes of the ecosystem, sustainable economic activity, the welfare of the population and the natural beauty of the region.

To reach our vision, we are committed to working with all stakeholders with a long-term interest in a clean and productive Barents Sea. By raising environmental awareness and pointing at solutions, the programme will

build bridges between sectors and across borders and increase the capacity of civil society, private sector and governments to engage in environmental issues.

We know it is possible and we need your support to achieve it.

## How can you help?

You can support the work of WWF in the Barents Sea by sending contributions to any of the national WWF organisations. The contact details of each office can be found on the WWF Arctic Programme website at <http://www.panda.org/arctic> and click on "where".

You can find more information about biodiversity in the Barents Sea and the work of WWF on the internet: [www.panda.org/arctic](http://www.panda.org/arctic). You can also contact a WWF office in the region.

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WWF is the world's largest nature conservation organisation with more than four million members and projects in 100 countries. WWF works globally to stop the destruction of nature and to preserve the biodiversity for future generations.

# Barents cod — last of the big cod stocks

**The world's cod stocks are in dramatic decline. Maren Esmark, WWF-Norway's marine officer, reports.**

A new report from WWF shows that the global catch of cod has fallen by more than 70 percent in 30 years. The total catch has declined from 3.1 million tonnes in 1970 to 950,000 tonnes in 2000. In the North American cod fishery, the catch has declined by 90 per cent since the early 1980s, while in European waters, the catch of the North Sea cod is now just 25 per cent of what it was 15 years ago.

In 1990 there was enormous pressure on the cod resources off the east coast of Canada, caused by the large fleet of Canadian and other international fishing fleets. The stock had been overestimated for years, and when scientists finally warned that the stock was declining and recommended major quota reductions, the Government was slow to respond. Declines became collapses and complete closures had to be implemented.

Today, the world's largest cod stock lives in the Barents Sea, in the arctic waters along the Norwegian and Russian coast. Its main prey is capelin and herring.

Northeast arctic cod is the official ICES (the International Council for the Exploration of the Seas) name for this oceanic and migrating cod stock, spawning inside the Lofoten Islands and spending most of its life in the Barents Sea. The stock is managed by Norway and Russia, and the fishery here provides half the world's total cod. ICES conducts research on marine resources in the North Atlantic and provides governments with advice on management of commercial fish stocks.

For years, Norway and Russia have ignored the scientific advice from ICES, allowing a higher cod quota than that recommended. In November 2003, the joint Norwegian-Russian Fisheries Commission set the fishing quotas for 2004 to 486,000 tonnes, while the scientific advice was for a total catch of less than 389,000 tonnes.



Photo: Nilsen/Alta

ICES therefore categorises the stock as “not sustainably harvested”.

ICES also expressed concern about the high fishing pressure, pointing out that the cod stock shows signs of a skewed age structure. The majority of the spawning stock consists of first-time spawners, producing eggs and larvae that are less viable than those of older fish. This trend can be a serious indication of overfishing, and the change in age structure was also seen in Canada before the cod stock collapsed.

Yet another reason for concern is indication of a large-scale illegal fishing and illegal dumping of undersized fish. This problem could be widespread, with illegal catches estimated to be almost 100,000 tonnes annually.

Despite the alarming signals, ICES had some good news in June 2004, as the stock of northeast arctic cod is growing and the spawning stock biomass is over the precautionary limit. Also, the quota advice for 2005 is higher than last year.

## **New threats to the Barents Sea cod**

There are major plans for increased industrial development in the Barents Sea. Both the Russian and Norwegian Governments are plan-

ning petroleum activities in the area and transportation of oil by ships is growing significantly. An oil spill from a ship or petroleum exploration in the spawning area or during the spawning season for cod could have a severe negative impact on the stock. To address these new threats, the Barents Sea cod stock should be strong and resistant,

WWF has commended Russia and Norway for their efforts over three decades to cooperate on fisheries resource management in the Barents Sea. However, WWF now wants the Norwegian and the Russian Governments to apply the precautionary approach and set the 2005 cod quota in accordance with the ICES advice. There is also a need for stricter control of all fishing activities in the Barents Sea and WWF wants immediate action from the two Governments to reduce illegal fishing.

The example from Canada shows how vulnerable cod can be to overfishing. Only sound management based on the precautionary principle can secure the long term sustainability of the world's last large cod stock.

**Cod drying on racks in the Lofoten Islands, Norway.**

Maren Esmark, WWF-Norway,  
mesmark@wwf.no

# Under Svalbard's seas

**The Norwegian Government recently expanded the marine protected areas around Svalbard. David Cothran, a marine naturalist, dives into the depths of Svalbard's underwater world.**

Each summer for the past five years, divers from Lindblad Expedition's *MS Endeavour* have been investigating and recording the marine environment around Svalbard. The programme, primarily designed to allow guests aboard the *Endeavour* to learn more about the biodiversity of Svalbard's seas, is also collecting valuable data on the marine communities of the islands. The dives, conducted regularly throughout the archipelago, are an example of the powerful partnership possible between tourism and conservation science.

The greatest asset tourism operators can offer scientists studying remote parts of the globe is mobility. In the Antarctic, which the *Endeavour* visits during the boreal winter while the Barents Sea is locked in ice, the ship is host to biologists from a privately-funded group called Oceanites. The primary project of Oceanites is the Antarctic Site Inventory, a monitoring effort to establish baseline demographic data for seabird colonies over a broad region of the northern Antarctic Peninsula.

Travelling aboard the *Endeavour* gives the Oceanites teams the opportunity to make regular visits to many more sites than would otherwise be practical.

In the Arctic, Lindblad Expeditions divers have been able to investigate a broad range of different sites around most of the major islands of the archipelago, to date including both sides of Spitsbergen, Nordaustland, Edgeøya, Barentsøya and Kvitøya. There have already been a number of long-term studies of Svalbard's marine ecosystems, conducted by the Norwegian Polar Institute, the Polish Academy of Sciences, and other investigators, but these have been largely confined to Bellsund, Hornsund and Kongsfjord. By diving at a number of previously unexplored sites, we have an excellent opportunity to add to this important body of work.

Diving unknown sites is also one of the most thrilling aspects of our work; when we slip beneath the surface we have no idea of what to expect. Visibility, current and bottom composition all vary dramatically from one site to another, so that on one dive we may find ourselves descending to a flat bottom of soft sediment, inhabited by large sea stars and snow-white crinoids (feather stars), while the next may take us along a steep rocky wall covered with brilliantly coloured soft corals and sponges.

Svalbard's seas are very cold, usually between zero degrees Centigrade and three degrees Centigrade (32°–37°F), but

equipped with drysuits and non-freezing regulators, the cold is seldom a hindrance.

Divers on the *Endeavour* are marine naturalists whose first responsibility is to broaden the Lindblad guests' experience of the Arctic. To this end our primary tools are high-quality digital video cameras in watertight housings. Marine life observed during the dives is filmed and the footage edited into presentations for the guests aboard the ship. This also allows the divers to make detailed records of their observations, particularly of rare or unusual species and unfamiliar behavior, which can later be shared with any other scientists who might find the data valuable. Video clips from our dives are available on request for any educational or research usage and we plan to post a gallery of still images on the internet in the near future.

In addition to the hand-held, diver operated video cameras, the *Endeavour* is also equipped with a remote-operated vehicle or ROV, capable of descending to a depth of 150 meters and returning live video images. Although this is not a very great depth by the standards of modern submersibles, it is deep enough to enter a significantly different realm biologically. At this depth, in Svalbard's seas, little or no light penetrates so the benthic communities are quite different from those found in shallower waters. ROV operations in Svalbard's fjords, in particular, have revealed previously unknown behavior and community associa-

(left) The sea anemone is a common inhabitant of the sea floor around Svalbard.



(right) Soft coral *Gersemia rubiformis*.



Photos: David Cothran

tions by returning some of the first in situ images ever taken of species formerly known only from dredging and other remote sampling techniques. Especially interesting are the ROV images of the very simple communities, made up of a few species of amphipods, brittle stars, anemones, tube anemones, eelpouts and snail fish, which are able to survive in the challenging conditions in the innermost reaches of the fjords.

This strange realm, directly beneath the faces of the glaciers, is often isolated from the waters of the mid and outer fjords by shallow sills of bedrock or moraine, and is subject to constant heavy deposition of silt from the glacial melt-water inflow, factors that make both colonization and survival quite difficult.

During our dives we have recorded a strange opisthobranch mollusk, possibly a large elysiid nudibranch, crawling across the dark bottom of Bellsund, and seen another unusual opisthobranch feeding from the soft sediments in the shallows of Freemansund. Recent video has captured interesting behavior such as isopods suspension feeding in strong currents while anchored to kelp with their rear legs, and cuttlefish burrowing in the deep sediment at the bottom of Palanderbukta.

In 2003 we were lucky enough to discover a rich rocky reef in Hinlopen Strait, crowded with corals, anemones, tiny basket stars, tunicates and polychaetes, all feeding from the powerful currents of the strait and fed upon in turn by robust arctic crabs and delicate pycnogonids. All of this provides only a small sample of the remarkable marine biodiversity of the Barents Sea, and an indication of the potential for more exciting discoveries as the diving programme continues. It is our hope that the observations we make and the data we collect will contribute to greater understanding of Svalbard's marine ecosystems and help to guide conservation measures that will protect the unique beauty of the region long into the future.

David Cothran,

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Lindblad Expeditions Undersea Specialist

# Environmental management on track claims Greenland



Photo: Pierre-Arnold Jessen

**Greenland: good environmental management?**

**A WWF report last year accused the Greenlandic Government of failing to live up to international conventions and agreements on the management of natural resources (4/03: Greenland fails – again). In this issue, the Greenlandic Ministry of Environment and Nature outlines some of the initiatives that Greenland's Home Rule Government has worked on in recent years to meet the standards of the international conventions and agreements. A new executive order on whales is one of several new initiatives that have been worked into law.**

Firstly it should be pointed out that the responsibility for protecting Greenland's living resources is shared between the Ministry of

Fisheries and Hunting and the Ministry of Environment and Nature. This article will only cover areas of responsibility that belong



Photo: Mette-Astrid Jessen

► the Ministry of Environment and Nature.

#### **Environmental protection law**

In December 2003 Greenland's parliament ratified a new environmental protection law. It is a comprehensive and modern framework law that provides the tools to, among other things, ensure that mammals and birds are exploited in a sustainable manner and in agreement with the precautionary principle.

The law directly states that efforts should be made to ensure the best possible breeding success, including peace and quiet during breeding season. With the environmental protection law, Greenland's Home Rule is now capable of meeting the demands of the Biodiversity Convention.

Open landscapes have also received better protection with the ratification of the environmental protection law. For example, protection guidelines have been established for particularly sensitive natural habitats and environmental assessments have to be carried out for any large public or private construction projects.

#### **Executive order on birds**

Furthermore, a new executive order on birds went into effect in February 2004. The new executive order is the result of a long and intensive debate that started in 2001 when the previous executive order was ratified.

During the preparation of the executive order, it was of utmost

importance that bird populations should be managed in a sustainable manner and with respect for the precautionary principle. As such, the executive order plays a part in fulfilling the responsibilities that Greenland has with respect to the Biodiversity and Ramsar Conventions.

Greenland's Home Rule is fully aware that there has been a marked decline in thick-billed murre, eider, and king eider populations in certain geographical areas. This awareness is reflected in the new executive order on birds, which bans the hunting of these populations during the particularly sensitive spring period in geographical areas where the biological council has stated that they are in decline. Another tool to make the hunting of particularly thick-billed murres and eiders more sustainable is the introduction of a quota system.

#### **CITES**

Finally, Greenland is well on its way to a full implementation of CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), which Denmark joined in 1977 on behalf of its entire commonwealth, which includes Greenland. With an executive order on CITES that is expected to be ratified in the summer of 2004, Greenland will have a complete and long-term set of rules for implementing the Convention. With this new law, Greenland, like several other CITES member countries, will among other things, implement the

creation of an official, impartial Scientific Authority as required by the Convention.

With financial support from the Danish Environmental Ministry's funding for the Arctic, the upcoming law will be followed up with a massive public awareness campaign.

#### **Fulfilment of the Ramsar Convention is also well on its way**

With respect to the 11 Ramsar sites in Greenland, it is essential to be aware that the threats to Greenland's Ramsar sites are quite different from those in many other places in the world. Threats such as construction projects, fertilisation and draining are non-existent on Greenland's Ramsar sites. The primary threat is hunting pressure, which there now has been an attempt to minimise with the new executive order on birds.

Knowledge about the sites has increased drastically in recent years and a project has been initiated that will develop a direct implementation tool for the Ramsar Convention in Greenland, including the development of management plans that integrate local knowledge.

#### **Information and dialogue on environmental protection**

In the last couple of years, Greenland's Home Rule has carried out an intensive information campaign, called Tulugaq (the Raven), on Greenland's living resources. The most emphasized element of the campaign is what the consequences will be if Greenland does not exploit its living resources in a sustainable manner.

#### **The future**

Greenland's Home Rule is convinced that all of the above-mentioned initiatives support the continuation of the ongoing movement toward a modern society that exploits and enjoys its natural resources in a sustainable manner.

*Mette-Astrid L. Jessen  
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# Is chemical safety REACH-able?

**The European Union will soon vote on new legislation concerning chemicals.** Brettania Walker, WWF-Arctic Programme's toxic officer, investigates.

Today, there are up to 100 thousand chemicals on the market. About 95 percent have not been adequately tested for toxicity to humans and the environment. More than 400 million tonnes of chemicals per year are produced and used in industry, as pesticides, and in common items including building and construction materials, electrical appliances, children's toys, cleaning products, food, and perfumes.

While many chemicals benefit us and make modern-day life possible, they also have the potential to contaminate our bodies and the

environment. Chemicals have now been found in humans and animals around the world, including wildlife in remote arctic regions. The evidence of the health hazards posed by these chemicals is mounting, although the full extent of adverse consequences is not yet known.

The fact that the vast majority of current-use chemicals have not been adequately tested for basic safety may come as a shock, but there is currently no law to require such safety testing. Instead of chemical manufacturers proving the chemicals they make are safe, the burden has fallen on governments to prove a chemical is so dangerous that it merits special regulation or removal from the market. This process is difficult and time-consuming, and a backlog of thousands of chemicals means potentially hazardous substances often remain un-tested and on the market for decades.

The European Union (EU) will soon vote on new legislation concerning REACH, which stands for Registration, Evaluation, and Authorization of CHemicals. This new approach would require detailed safety information for about 30,000 chemicals to be made publicly available over the next 15 years. Priority for registration would go to new chemicals, substances considered especially hazardous based on their chemical properties, and those produced in the largest quantities. Chemicals shown to be of 'very high concern' would require a special authorisation permit for use for a limited time, during which the manufacturer would be encouraged to develop and switch to safer alternatives.

It is widely accepted that the REACH legislation will be passed in some form. Once passed it will be implemented in all EU member states, most likely by late 2006 ➤

■ Many chemicals in wide use today are assumed to be safe by consumers and other downstream users. However, chemicals used in a variety of products such as clothing, food containers, computer equipment, and toys are contaminating our bodies and the environment

and may pose a dangerous health risk. The European Union's REACH legislation aims to ensure adequate testing of chemicals on the market, phase-outs of the most hazardous substances, and development of safer alternatives.

All of these common items may contain toxic chemicals that can contaminate humans in the home. Many chemicals are also transported great distances by air and ocean currents, leading to contamination of arctic wildlife species.



Some material to cover furniture.



Plastic wrapping for food.



Beauty products.



Plastic used to manufacture baby bottles.



Television sets and computer screens.



Pesticides and other products used in fruits' production (such as oranges).

➤ or 2007. The main threat to REACH is, therefore, not whether it will be passed, but the strength of the final legislation and the loopholes that remain available to industry.

Since the legislation was drafted in 2001 it has been considerably weakened due to industry lobbying in both Europe and the United States. The balance between protecting health and the environment and industry concerns has shifted in favor of industry. Of particular concern is that the legislation in its current form allows chemicals of 'high concern' to remain in use even when safer alternatives are available, as long as industry can show 'adequate control' over the chemical.

Of the arctic countries, REACH will directly impact the EU countries of Finland, Sweden and Denmark. Norway and Iceland will also end up implementing REACH due to their membership in the European Economic Area (EEA). It is difficult to say what effect REACH will have on contamination of the arctic environment, as the final form of the legislation is still being debated.

However, as Europe currently produces about a third of the world's chemicals, REACH is certain to lead to higher safety standards for the chemical industry on a global level and will serve as a model and stimulus to non-EU countries to reform their chemical policies as well.

Better knowledge and evaluation of chemical hazards, phase-outs of the most hazardous chemicals, and a push to develop safer alternatives within the EU countries would, of course, be of great benefit to the arctic environment, where long-range transport of contaminants poses a major threat.

Along with the Stockholm Convention on Persistent Organic Pollutants, robust REACH legislation may be the next best step in protecting the environment from the world's most hazardous chemicals and setting a precedent for safe and sustainable chemical use.

It remains to be seen if passing the legislation in a form strong enough to adequately and proactively protect human and environmental health is a reachable goal.

Brettania Walker,  
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# The coming arctic



**In the last issue of the *Arctic Bulletin* (1/04), Franklyn Griffiths presented his critique of the “thinning ice thesis.” He argued that contrary to the views of some, climate change is not creating a challenge to Canadian sovereignty in the Northwest Passage. Rob Huebert thinks he’s wrong.**

The main thrust of Franklyn Griffiths’ argument is that despite climate change increasing temperatures in the polar regions, the

resulting melting of the ice cover will not be consistent and extensive enough to result in widespread international shipping through the

# maritime sovereignty crisis



Photo: Bryan and Cherry Alexander

Canadian arctic archipelago. At no point soon will the main shipping companies want to risk sailing in uncertain northern waters even if they appear more navigable.

Furthermore, the changing security concerns of the United States will diminish their desire to challenge the Canadian claim to have sovereignty over the Northwest Passage. The net effect according to Griffiths is that concerns that Canada will be facing a sovereignty

crisis over the Northwest Passage are exaggerated and possibly wrong. This article however maintains the opposite. Canada and possibly Russia will soon be facing a sovereignty crisis as temperatures rise in the arctic even faster than had been expected.

Despite providing a coherent and plausible case, there is reason to believe that Dr. Griffiths optimism that no crisis is looming is misplaced. Two factors are now

converging to create an oncoming sovereignty crisis for Canada over the Northwest Passage.

First, the arctic scientific community is increasingly coming to the conclusion that the ice cover in the entire arctic is decreasing. Second, the issue of sovereignty in many regards tends to be driven more by perceptions than by any other factors. In short, the precise date the Northwest Passage becomes ice free for an extended period in the summer is not as important as the perception that it is becoming ice free and shipping is possible. It is the combination of these two factors that will create a sovereignty crisis for Canada.

The presence of ice for almost all of the year has meant that few ships have the ability to transit either the Northwest Passage (or the Northern Sea Route for that matter). However, there is a developing consensus that this is changing. Scientific studies on the impact of climate change on the Arctic are pointing to an increase of temperatures that is already causing a decrease in ice cover.

The most recent data from NASA's earth observation satellites document an increasing melting of the ice cover especially in the summer months.<sup>1</sup> In turn this is supported by observations of the northern indigenous population who also note the rapid change that is occurring throughout the entire region including the decreasing ice cover.<sup>2</sup>

The most comprehensive examination of this issue is also pointing to an increase rate of melt in the region. The Arctic Climate Impact Assessment that is now being prepared for the Arctic Council

**Melting ice floes in front of an iceberg off the coast of Ellesmere Island, Nunavut, Canadian Arctic.**

<sup>1</sup> Josefino Comiso, "Warming Trends in the Arctic from clear sky satellite observations," *Journal of Climate* vol.16, no.1 (Nov 2003).

<sup>2</sup> Igor Krupnik and Deanna Jolly (eds.) *The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change*, *Frontiers in Polar Science* (Fairbanks Alaska: Arctic Research Consortium of United States, 2002).

► includes the work of the world's leading scientific experts on the subject. While the report is not yet complete, Robert Corell who is the chairman of the study, has made it clear in preliminary presentations that almost all of the models that they are using point to an substantially ice free summer period in the Canadian and Russian north by the middle of this century.<sup>3</sup>

This process will not occur in a strictly linear fashion and some years will be colder than the preceding. But it is difficult to argue against the developing scientific and indigenous evidence that is now mounting. While it is impossible to conclusively "prove" that Griffith's reading of the literature is incorrect, it does seem that he is being too conservative.

But to a large degree the scientific debate regarding the rate of melt is only part of the problem. What will act to create a sovereignty crisis is the perception by the governments of the arctic nations that the ice is melting. If the Governments of Canada and Russia come to believe that their sovereignty over their arctic waters is threatened they will act.

Likewise if the Government of the United States sees a potential to advance its position regarding international navigation in these waters, it will do so. The question then is what does the perception of "thinning ice" mean to the three governments?

One of the recurring themes in circumpolar relations is the issue of arctic maritime sovereignty. The Governments of Canada and Russia/Soviet Union have periodically exerted considerable political effort to claim sovereignty over the arctic waters that make up the Northwest Passage and Northern Sea route respectively. Likewise the American Government has also taken steps to limit the control of the Russian and Canadian Governments in what it sees as international waters.

While the concept of sovereignty is multi-dimensional and has a large number of meanings, it can best be understood as the ability of a state to have a recognised international right to control what happens within a specified geographic area. The right of control includes the right to enforce

its decisions with force if necessary. Thus within the Arctic, the issue is who gets to control what happens in the Northwest Passage and Northern Sea.

When the United States attempted to send icebreakers through the Northern Sea Route without asking permission (ie acknowledging Soviet sovereignty) in 1967, the Soviet response was to send warships to block the entry of the American vessels. Likewise when American vessels sailed through the Northwest Passage without asking Canadian permission in 1969, 1970 and 1986, this was done to signal that the Canadian Government could not control who enters these waters.

All three of these arctic nations see their position as being important to their national interests and defend their positions vigorously. What has acted to mitigate the inherent tension between the three countries has been the inaccessibility of these waters caused by ice.

However, as temperatures increase and the ice decreases, it can be expected that all three nations will take steps to protect their positions. It does not really matter, as Griffiths argues, that the main shipping companies may want to avoid a melting arctic because of uncertainty over ice conditions. As soon as any company wishes to go through either waterway, it will need to "pick a side". It will either take the American position and not ask the Russian or Canadian Government for permission to enter these waters, or it will ask permission thereby supporting the Canadian and Russian position.

If such a company asks permission from Canada or Russia, the United States will be faced with the option of either accepting this and abandoning its position of the last 40 years or to challenge the company. What will be driving the American position is the concern about the international precedent that could be set. Other maritime nations boarding international straits will be watching the American response and may try to use such actions to justify extended control for themselves over their adjacent waters. Thus, even if the shipping company does not ask permission, the United States will find itself required to defend the

rights of the company, even if it did not want to do so at the time.

Griffiths argues that despite the fact that the American Government has traditionally placed an emphasis on freedom of navigation through northern waters, such policies may be changing in the face of its new concerns over international terrorism. However, despite the increased American concern over continental security, there are no signs that the US Government is willing to move away from its position regarding arctic waters.

On the contrary, there are some clear indications that the American Government is determined to act in a manner that bolsters the American position. American Ambassador to Canada Paul Cellucci clearly stated that the United States and Canada continued to agree to disagree on the international status of the Northwest Passage when he visited Yellowknife in May 2003.

The United States Government has also re-opened the dormant maritime Beaufort Sea boundary dispute with Canada in August of 2003 by allowing oil and gas exportation to take place in contested waters. These are hardly the actions of a nation that is changing its position on arctic sovereignty.

Thus, as the scientific evidence mounts that the ice cover is decreasing in the Arctic, it is only a matter of time before the Governments of the United States and Canada will find themselves facing an international crisis over sovereignty. This will happen when an international shipping company attempts to take advantage of the melting. It does not matter what company does this, or whether or not the Northwest Passage or the Northern Sea Route is truly ready for shipping. All that will be required is that someone believes that it is the case. That is why the "thinning ice" thesis must be taken seriously. If the crisis is to be averted, these three arctic nations need to begin a dialogue now, and not when a crisis occurs.

<sup>3</sup> Robert Corell, "Climate Change, FDCH Congressional Testimony," Senate Committee, Science and Transportation Committee March 3, 2004.

# Global climate change may affect wolves in the high Arctic



Photo: Stefan Wikstrand

*Wolf, Canis Lupus.*

**Climate change in the Arctic does not always mean temperatures are rising. A colder summer climate seems to be playing a part in the decline of a wolf population in the High Arctic. Biologist L. David Mech reports on his research.**

A wolf pack dependent on muskoxen and arctic hares on Ellesmere Island in northeastern Canada has denned and produced pups from at least 1986 through to 1997.

But when summer snow started to cover vegetation in 1997 for the first time since records were kept, the herbivore nutrition-replenish-

ment period was cut in half and muskox and hare numbers dropped drastically. As a result the area has stopped supporting denning wolves.

My study found an apparent effect of climate change on the decline of wolves in this area and traced the mechanism of the decline through three levels of the food chain (vegetation, herbivores and wolves).

During each summer, from 1998 through 2003, an assistant and I spent five to 11 days in the Eureka area of Ellesmere Island, on all-terrain vehicles searching for wolves, muskoxen and arctic hares.

Muskoxen, and arctic hares have long been common in the area and wolves have denned there for decades or even centuries. From at least 1986 through 1997, a pack of three to 13 wolves preyed on muskoxen and arctic hares and

produced pups almost annually in traditional dens in the area. However, after 1997, the wolf-prey system changed critically.

During our visit in 1998 we found there had been no wolf reproduction as evidenced by lack of active teats on the female and lack of attendance at the wolves' traditional dens. Muskox and hare numbers were low and we found remains of nine muskoxen that had perished during winter and possessed no femoral marrow fat, a sign of nutritional depletion.

Again, during a visit in 2001, we found wolves had not reproduced and no wolves were sighted in the area. There were no wolf scratchings (a sign of a territorial pair) in the usual locations, nor any other wolf sign at the traditional dens, indicating no residential use of the area by wolves. We found another 17 sets of muskox remains. ➤

► It appeared that some pervasive factor had impaired the nutritional condition of both muskoxen and hares enough to cause over-winter mortality, to minimise reproduction, and to reduce their populations enough that they could no longer support wolves.

Logically, the most likely factor that could affect all of these population characteristics in two such disparate herbivore species would be weather. From 1947–1990, temperatures and precipitation for August and September had been such that vegetation had remained snow-free every year at the end of August, and an average of only 6cm of snow had covered it even by the end of September.

However, during 1997 and 2000, August and September temperatures dropped below long-term norms, precipitation and snowfall increased above norms, and snow covered the vegetation by August 25, 1997 and August 14, 2000 much earlier than usual. No other weather abnormalities were found during these years.

Herbivores gain most of their nutrition during summer when vegetation grows, and they depend on the fat they store during the summer replenishment period to carry them through the following winter.

In this study area, this usual replenishment period only lasts from about July 1, when winter snow has disappeared and vegetation sprouts new growth, to about October 1 when snow covers the vegetation.

During 1997 and 2000, however, the summer replenishment period was cut almost in half. This lack of time to replenish nutrition was probably the main factor causing starvation the following winter and minimizing reproduction the following summer.

The combination of low temperatures and high precipitation that resulted in summer snow that persisted after mid-August was highly unusual, yet it occurred during two of the last six summers.

Although prey and wolf numbers dropped precipitously in the study area, residual numbers of prey survived, and wolves are mobile enough to immigrate back from surrounding areas and resume reproducing in the study

area should conditions improve. Nevertheless the climate effect on the muskox, hare, and wolf populations in the study area was so devastating that it is reasonable to suggest that, had similar weather occurred regularly in the past, these species would not have survived in this area.

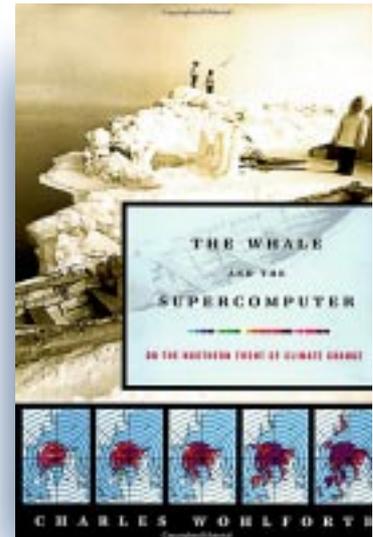
One of the correlates of global climate change is increased weather variability. In the present study, the low summer temperatures, high precipitation, and resulting snow during 1997 and 2000 were the most extreme since weather records were first kept in 1947.

Since even average daily August temperatures at sea level in the study area are only 2.9°C above freezing and most of the study area is up to 600 m higher than sea level and thus colder, even minor temperature decreases would change normal amounts of precipitation from rain to snow.

Such a change is critical to herbivores because snow covers their food and increases the energy necessary to obtain it. Even seemingly small amounts of snow can hinder foraging because the constant arctic wind deposits the snow in deep drifts in valleys and depressions, which at 80° latitude is where most of the vegetation grows.

In 1997 and 2000, however, not only were August temperatures abnormally low, but precipitation was double and triple monthly norms. The resulting herbivore mortality and failure to reproduce caused extreme drops in their populations. Wolf numbers, then, with little else to sustain them, had to follow. Cascading effects from extreme weather through vegetation to prey and to wolves are well known at lower latitudes, but because these effects are less extreme there, prey and wolf numbers may rebound faster. Thus global climate change effects on wolf-prey systems farther south may not be so noticeable. However, this study shows that at 80° N such changes can be dramatic and devastating to the wolf-prey ecosystem.

L. David Mech, Northern Prairie Wildlife Research Center, Biological Resources Division, U.S. Geological Survey, E-mail: mechx002@tc.umn.edu



■ *The Whale and the Supercomputer*  
On the Northern Front of Climate Change  
Charles Wohlforth  
North Point Press  
2004  
pp 322  
ISBN: 0-86547-659-4

The arrival of *The Whale and the Supercomputer* couldn't be more timely. With the publication of the Arctic Council's Arctic Climate Impact Assessment just months away, Charles Wohlforth gives an objective, beautifully written account of what climate means to the Eskimos of Alaska, and how scientists are wrestling with the challenges of climate modelling in the Arctic. Perhaps the science – at least to those who read the Arctic Bulletin – is well known. What Wohlforth excels at, however, is in unearthing the dramatic stories of what climate means for those who live in the Arctic and in bringing to life the personalities involved in the study of climate change.

From the dramatic rescue of dozens of Eskimo whalers from ice that has broken away from the shore, to a lesson in the fascinating properties of sea ice, and an insight into the personalities of those who study it, Wohlforth writes with wit and passion. Throughout he communicates his love of the Arctic, and his real concern for the changes that are taking place there. This is required reading for anyone who wants to know more about climate change and the Arctic.

Julian Woolford, jwoolford@wwf.no

## Forthcoming arctic meetings & events

### Arctic Council events

#### Circumpolar Protected Areas Network (CPAN) Meeting

- WHERE: Anchorage, Alaska • WHEN: September 13
- CONTACT: [caff@caff.is](mailto:caff@caff.is)

#### Sustainable Development Working Group (SDWG) Meeting

- WHERE: Whitehorse, Yukon, Canada • WHEN: September 14–16
- CONTACT: Email: [bfunston@nrcan.gc.ca](mailto:bfunston@nrcan.gc.ca)

#### CAFF (Conservation of Arctic Fauna and Flora) X Biennial Meeting

- WHERE: Anchorage, Alaska • WHEN: September 14–16
- CONTACT: Email: [caff@caff.is](mailto:caff@caff.is)

#### Arctic Climate Impact Assessment (ACIA) International Scientific Symposium on Climate Change in the Arctic

- WHERE: Reykjavik, Iceland • WHEN: November 9–12
- CONTACT: Email: [bhameister@iarc.uaf.edu](mailto:bhameister@iarc.uaf.edu)

#### Fourth Arctic Council Ministerial Meeting, Reykjavik

- WHERE: Reykjavik, Iceland • WHEN: November 17–18
- CONTACT: Email: [bk@mfa.is](mailto:bk@mfa.is)

### Conferences and workshops

#### Life in the Cold 2004

- WHERE: Inside Passage, Alaska • WHEN: July 25–31
- CONTACT: Email: [ffbmb@uaf.ed](mailto:ffbmb@uaf.ed)

#### 14th Inuit Studies Conference: Bringing Knowledge Home—Communicating Research Results to the Inuit

- WHERE: Calgary, Alberta, • WHEN: August 11–14
- CONTACT: Email: [wkjessen@ucalgary.ca](mailto:wkjessen@ucalgary.ca)

#### International Symposium on Arctic Glaciology

- WHERE: Geilo, Norway • WHEN: August 23–27
- CONTACT: Email: [int\\_glaciol\\_soc@compuserve.com](mailto:int_glaciol_soc@compuserve.com)

#### Climate Change in High Latitudes

- WHERE: Bergen, Norway • WHEN: September 1–3
- CONTACT: Email: [post@bjerkes.uib.no](mailto:post@bjerkes.uib.no)

#### 3rd Northern Research Forum Open Meeting: The Resilient North—Human Responses to Global Change

- WHERE: Yellowknife, Northwest Territories • WHEN: September 15–8
- CONTACT: Email: [nrf@unak.is](mailto:nrf@unak.is)

#### WWF workshop on ecotourism development in Chukotka

- WHERE: Anadyr, Chukotka, Russia • WHEN: September 20–25
- CONTACT: [mgeitz@wwf.no](mailto:mgeitz@wwf.no)

#### 55th American Association for the Advancement of Science (AAAS) Arctic Science Conference

- WHERE: Anchorage, Alaska • WHEN: September 29 – October 1
- CONTACT: Email: [syaas@email.alaska.edu](mailto:syaas@email.alaska.edu)

#### People, Wildlife and Hunting: Emerging Conservation Paradigms

- WHERE: Edmonton, Alberta, Canada • WHEN: October 22–24
- CONTACT: E-mail: [mf2@ualberta.ca](mailto:mf2@ualberta.ca) [www.conservationhunting.ca](http://www.conservationhunting.ca) or

#### For more on these events and other meetings, please visit:

<http://www.arcus.org/Calendar/upcomingEvents.shtml> • <http://www.iasc.no/SAM/samtext.htm>

■ ■ Brettania Walker has joined WWF's Arctic Programme as toxics officer. Brettania earned her Bachelor's degree in biology in 1999 from George Mason University in the US. More recently, she earned a graduate certificate in international health policy in 2003 and a Master's degree in environmental public health in 2004, both from The George Washington University in the US.

Brettania previously worked at the National Institutes of Health (USA) studying drug toxicology. She recently completed five months' research in

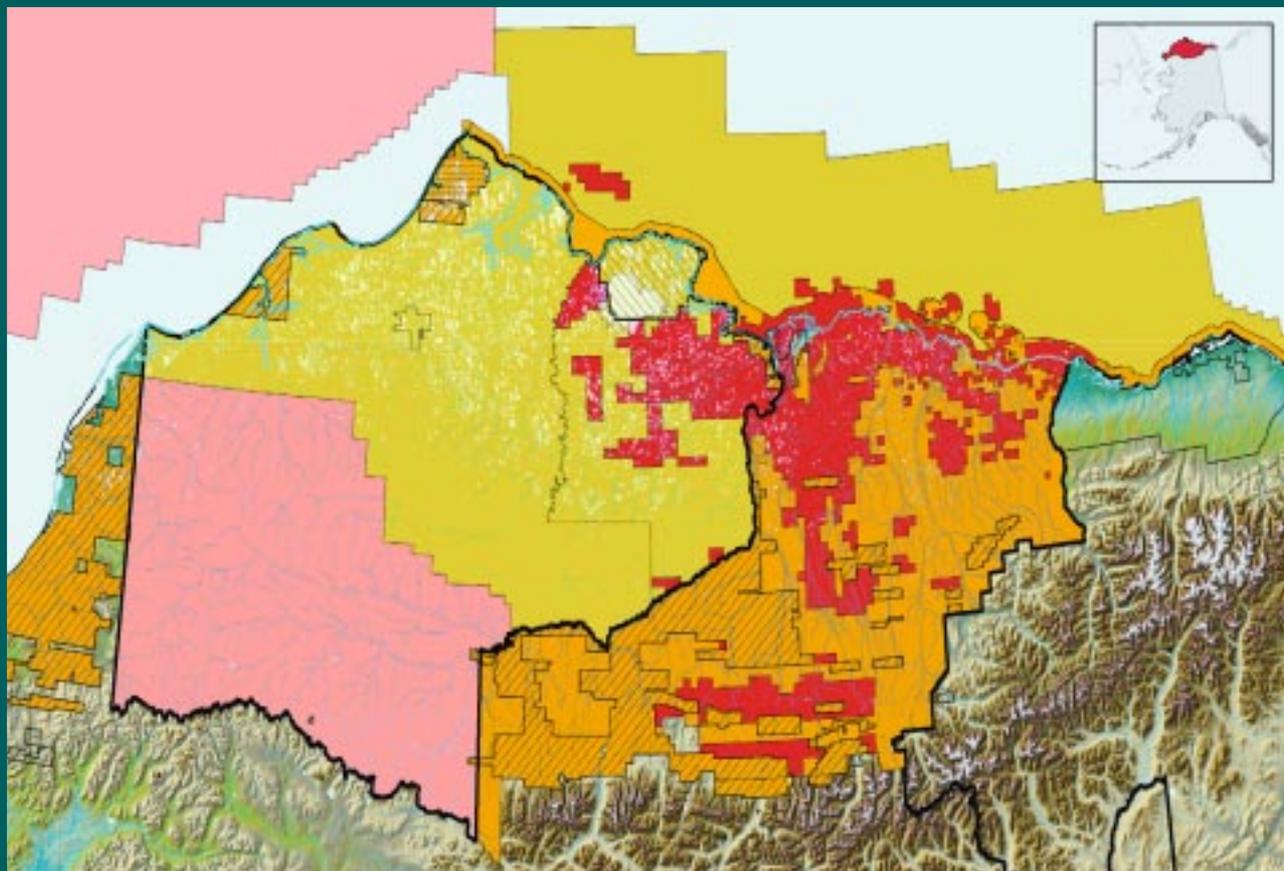


Brazil for her Master's thesis investigating adverse infant health outcomes. Her introduction into the problem of toxics in the arctic environment began when she did a research project in graduate school on contaminants in the traditional food of indigenous peoples of Canada. Brettania has had a life-long love of wildlife and an interest in nature conservation.

## Readership survey winner

■ Thanks to everyone who took the time to complete the Arctic Bulletin readership survey. We'll let you know some of the findings in the next issue. The winner of our prize draw for a set of reindeer antler salad servers is Dr John Marsh, of Trent University, Ontario, Canada. The survey will remain active for a little longer on our website at <http://www.panda.org/arctic> so you can still send us your feedback.

## Current and proposed oil and gas leases on Alaska's North Slope



- Existing Federal and State leases
- Active Federal Lease Plan Area
- Proposed Federal Lease Plan Area
- 1999 Teshekpuk Lake Area deleted from leasing. May 2004 Bureau of Land Management releases plan to lease in this remaining 13% of the northeast planning area.
- Proposed State Leases
- ASRC Surface and/or subsurface lands
- Barrow Native Lands

### National Petroleum Reserve – Alaska (Federal Bureau of Land Management)

- \* **NORTHEAST PLANNING AREA**  
4.6 million acres – 87% opened to lease 1998  
Lease sale June 2004
- \* **NORTHWEST PLANNING AREA**  
8.8 million acres – 100% opened to lease 2004  
17% deferred from leasing for ten years  
First lease sale June 2004
- \* **SOUTH PLANNING AREA**  
10 million acres Scoping starts summer 2004

### Arctic Ocean (Federal Mineral Management Service)

- \* **BEAUFORT SEA PLANNING AREA**  
9.4 million acres – 87% opened to lease 1998  
Lease sale 186 offered 97% September 2003  
Next lease sale March 2005
- \* **CHUCKI SEA PLANNING AREA**  
33.8 million acres  
Industry Nominations submitted in April 2004

### State

- \* **NORTHSLOPE AREA WIDE, FOOTHILLS AND BEAUFORT SEA**  
11 million acres in active lease plan areas  
3.9 million acres in existing leases



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WWF is the world's largest and most experienced independent conservation organisation, 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.

