



Arctic Bulletin



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WWF Arctic Bulletin

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Editorial

Russia's arctic future: is it oil and gas?

While most of us are focused on events in Iraq, rapid and large-scale oil development is starting in Russia's north (pp.18–19). It's driven by US and European dependence on oil and gas and what is likely to be long-term political instability in the oil-producing countries of the Middle East. One obvious solution for the US and Europe is to reduce energy consumption and invest in alternative energy sources. Instead, the strategy is to replace Middle Eastern oil, and to a lesser extent gas, with more secure supplies – from Russia.

Damn lies...

The American author Mark Twain once said that there were “three kinds of lies: lies, damn lies and statistics.” In this case, however, statistics tell us quite a bit about what to expect in northern Russia, the rest of the Arctic, and other areas around the world with undeveloped energy reserves.

The US is the world's biggest energy user. And don't expect energy use to go down any time soon – the US Department of Energy estimates that by 2025, US energy use will increase 40%.

The US is heavily dependent on hydrocarbons, particularly imported ones, to supply its energy habit. Nearly two-thirds of US energy in 2002 came from oil and natural gas. In the first six months of 2002, net US imports of oil were 55% of consumption, with 20% of oil imports coming from the Persian Gulf.

One would think that a major strategic goal for the US would be to reduce dependence on oil and gas, since domestic supplies cannot meet demand and dependence on foreign suppliers creates vulnerability. To the contrary. US oil and natural gas consumption is projected to rise by 48% between now and 2025, even faster than total US energy consumption. Moreover, by 2020, net US imports of oil will account for 68% of consumption, while net imports of natural gas will equal 22% of consumption.

The picture for the EU isn't much better. It's the world's second biggest user of energy, consuming 63.3 quadrillion Btu (British thermal unit) in 2000. Although the EU recently initiated a strategy for managing demand in member states, its total energy consumption is nonetheless projected to increase by 29% between now and 2020. In 2000, oil and natural gas made up 66% of total energy consumption in the EU. In 2020, they are projected to comprise 73% of total EU consumption.

The EU is even more dependent on imported oil and gas than the US: it currently imports 70% of the oil it consumes, with 32% coming from the Persian Gulf. In 2030, the EU is projected to import 90% of its oil. Similarly, net imports of natural gas, currently 40% of consumption, are projected to rise to 70% of consumption in 2030.

Russian oil and gas reserves...

What does this have to do with Russia? According to energy experts, Russia holds the world's largest reserves of natural gas, with proven reserves of 1.700 trillion cubic feet (Tcf). It also has either the third or eighth, depending on estimates, largest oil reserves in the world, estimated at 48.6 to 150 billion barrels. Perhaps most importantly, a good part of Russia's reserves are in the north, far away from political hot spots. Likely transport routes for these reserves run through the relatively secure Russian north, to the arctic port of Murmansk and then to US and EU markets by supertanker.

Russia is just as interested as the US and Europe in an energy cooperation. Its government, like the governments of the EU, Norway and the US, has specifically linked oil development to national and international security. Its oil companies are building up capital, in part through exports, in order to invest in development of new fields. Indeed, one can no longer refer to them as Russian companies – they are already operating internationally, for example in Vietnam and in some of the CIS states that will soon enter the EU.

... and the environment

This month's wreck of the *Prestige* oil tanker off the coast of Spain showed that even an oil spill far from the coast can devastate fragile coastal habitats and fisheries. Plans for an oil terminal in Murmansk (p. 19) will mean that tankers carrying more than one million barrels of oil per day will be traversing the Barents Sea, with its world-class fisheries and seabird colonies, in not so very long. Both Norwegian and Russian authorities openly admit that their oil spill response capacity is grossly inadequate to meet the challenges this will pose.

It's ironic that oil development in the name of security will in some ways also increase security risks. The proposed Murmansk oil terminal and pipeline are located on the Kola Peninsula, which has the world's highest concentration of nuclear reactors. Russian naval facilities on the Kola Peninsula contain decommissioned nuclear submarines, nuclear waste, spent fuel, and tactical nuclear weapons, which present environment and security threats to varying degrees. Indeed, this area is the number-one priority for efforts to secure material that could be used by terrorists for nuclear attacks (see AB 3/02). Oil development here will vastly increase access to and traffic through this area. Lets hope efforts to address the nuclear threats on the Kola Peninsula succeed – soon.

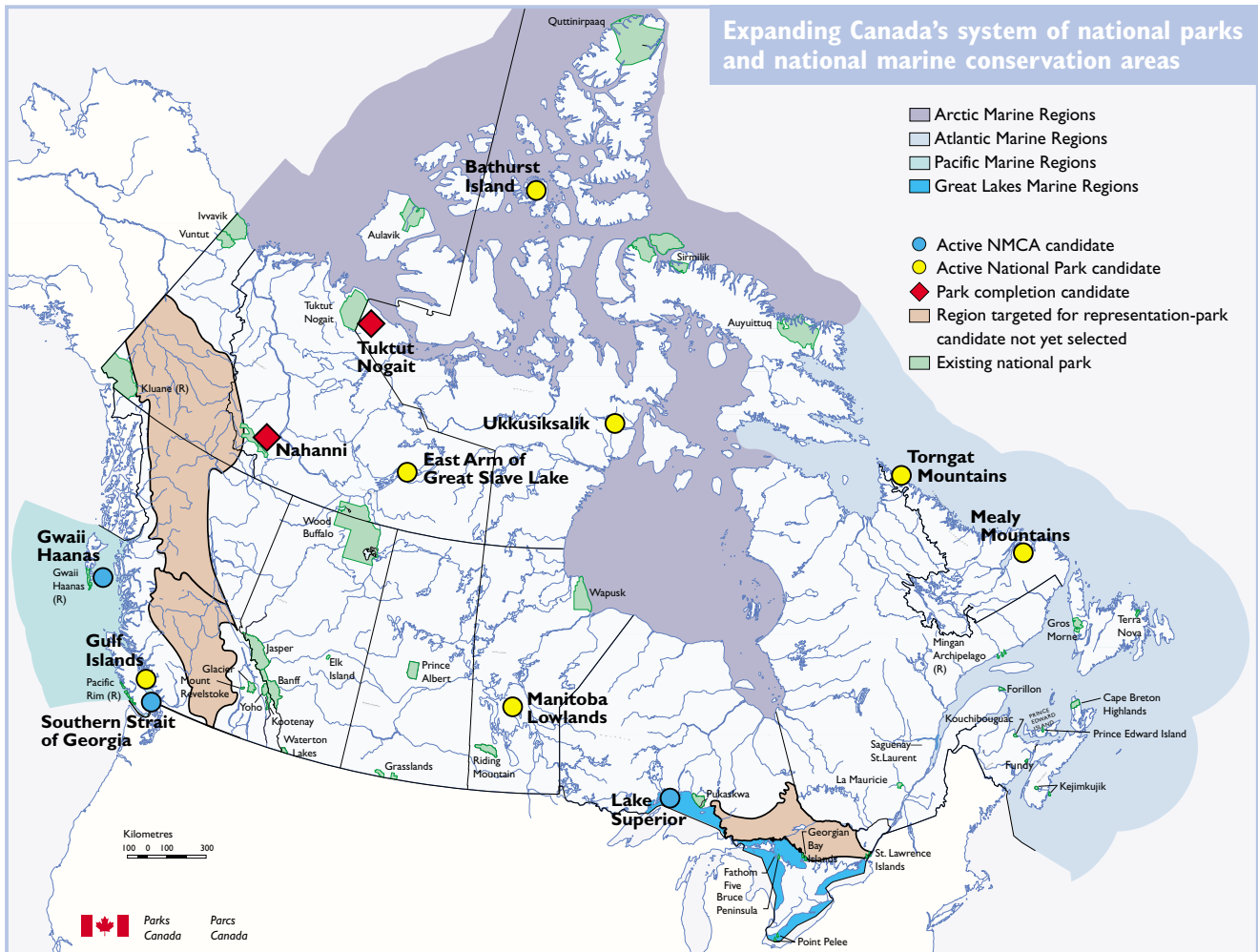


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Arctic scores five out of ten in Canada



Five out of ten new national parks in Canada will be in the Arctic: two in Nunavut, two in Labrador and three in the Northwest Territories.

The announcement was made by Canadian Prime Minister Jean Chrétien in October following a commitment to the United Nations in Johannesburg.

But environmentalists remain cautious. Canada's existing national parks badly need funding to restore and maintain their ecological integrity. New parks will also require ongoing management and financial support.

Pete Ewins, director of WWF-Canada's Arctic Programme, said: "The Canadian PM is to be congratulated on this visionary commitment that goes a long way to completing Canada's National

Parks network on land. Provided full funding is allocated in the coming federal budget, Canadians can be quite optimistic that the ecological integrity of their National Parks system will improve considerably."

Two of the new parks are in Nunavut. Ukkusiksalik National Park

lies north of the Arctic Circle and will protect a large watershed with diverse arctic wildlife and habitat. Its future is largely guaranteed.

Bathurst Island has undergone a feasibility study and has interim protection until 2004. The area is a major calving ground for the Peary caribou, an endangered species of



Humpback, Canada.

caribou found only in Canada. The area is threatened by oil and gas development.

Two parks are proposed for Labrador: the Mealy Mountains and the Torngat Mountains. The Mealy Mountains are a rugged mountain tundra region with wetlands, boreal forest, and the wild Eagle River. The region provides habitat to numerous mammal, wetland, and marine species, including six species of seals, the white beaked dolphin, and blue, sei, humpback, minke, and killer whales.

The Torngat Mountains, in the fjords of northern Labrador, are home to polar bears and caribou. The government is preparing for public consultation with the Nunavik Inuit communities there.

The Northwest Territories will also gain three new parks. The east arm of Great Slave Lake was identified for potential protection in 1970 and the Lutsel K'e Dene First Nation has indicated its support to begin studying this proposal.

The Nahanni National Park Reserve will be expanded to further protect its wilderness, Dall sheep population, woodland caribou, and diverse karst topography.

The third region is the incomplete Tuktot Nogait National Park. The region currently protects the calving grounds of the Bluenose caribou herd, along with spectacular river canyons and a high density of raptor nesting areas.

The last time new national parks were pursued with such intensity was over 30 years ago, when Jean Chrétien was the Minister of Indian and Northern Affairs for Canada. Since then, the Arctic has witnessed several First Nation land claim settlements.

Many of these agreements require increased participation by indigenous groups in the planning, establishment, and management of national parks. The new parks will be an opportunity to gauge the effectiveness both of the agreements, as well as the commitment of the federal government to participatory land management.

National parks in Canada currently protect a total of 224,000 square kilometers. The new parks will add about 100,000 square kilometres.

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Walruses,
Chukotka.

ECORA boost for arctic Russia

Three million US dollars from the Global Environment Facility (GEF) are being pumped into a conservation and sustainable development project in the Russian Arctic.

The ECORA project will develop and implement ecosystem management strategies in three areas: Kolguev island in the eastern Barents Sea, Kolyma river basin in Yakutia, and the Beringovsky district in Chukotka.

These areas all contain globally important biodiversity currently threatened by poorly controlled development activities.

The project will receive the US\$ 3 million in addition to around US\$ 3.88 million raised through co-funding.

The project management team is now preparing budgets and plans, and finalising institutional arrangements, all pre-requisites for the release of the GEF funds. Formal work on ECORA is expected to begin early in 2003.

Stefan Norris, head of conservation with WWF International's Arctic Programme, said: "The process leading to this decision has been long, involving preparations

from a range of western, Russian, and international institutions and organisations over the past two years.

"Fact finding missions were made to all participating regions in the Russian Arctic, a series of situation analyses and preparatory reports were produced, and major efforts were made to secure co-financing from countries supporting the project.

WWF, through its Russian Programme Office and International Arctic Programme, has supported the development of the ECORA project, and is – due to its presence on the ground in or near the model areas – well positioned to contribute constructively to the project once the final implementation arrangements are in place."

The full title for the ECORA project is 'An Integrated Ecosystem Management Approach to Conserve Biodiversity and Minimize Habitat Fragmentation in Three Selected Model Areas in the Russian Arctic'.

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Iceland power plant may run at loss

A new report commissioned by the Iceland Nature Conservation Association (INCA) on the profitability of a controversial hydropower plant in eastern Iceland concludes that the project will lose around 17 billion Icelandic Krona (197 million US dollars).

INCA is now calling for transparency in the financial arrangements around the financing of the Karahnukar hydropower plant, which it believes will impact the Icelandic economy as a whole.

Arni Finnsson of INCA said: "The project is so big and requires such huge investment that it will force a stop to all major investments other than the Karahnukar Project in the next five to seven years."

A decision about whether the hydropower plant and aluminium smelter will go ahead in Eastern Iceland was expected in November.

However the Icelandic Parliament appears to be postponing a vote on the project until it



Karahnukar is an important reindeer calving area.

is back in session in January 2003.

Alcoa, which is building the aluminium smelter, is scheduled to vote on the development in January as well.

Meanwhile, a series of TV commercials have been running on Icelandic TV stations protesting at the proposed development. The commercials were produced and paid for by volunteers and through charity raising events.

A special supplement was also

produced in the daily Icelandic newspaper *Morgunblaðid*. The *Highlands Issue* focused on the threat posed by the Karahnukar Project.

The project will submerge parts of the Dimmugljufur canyon and breeding grounds for pink-footed geese and reindeer under a 57-kilometre square reservoir, and divert two major rivers in the area.

JULIAN WOOLFORD (jwoolford@wwf.no)

Challenge to Bush on toxics

A wide range of environmental, public health, and labour groups in the US have joined together to denounce their government's efforts to derail proposed reforms underway in the European Union.

In a letter to President George W. Bush, more than 50 organisations applauded EU efforts to protect against hazardous chemicals and countered Bush Administration claims that the legislation would be bad for US business.

"This letter is evidence of broad grassroots support in the US for government policies that protect people, wildlife, and ecosystems from chemical contamination," said Michael Warhurst, WWF's Senior EU Toxics Programme Officer. "Instead of lobbying to slow environmental progress in Europe, the US should take some lessons from overseas and begin to tackle this global threat."

The European Commission has proposed a new chemicals policy called REACH (Registration, Evaluation and Authorisation of Chemicals) to address the large gaps in public health and environmental protections against chemicals. The proposals would shift the burden of proof on industry by requiring adequate scientific data as a precondition for selling chemicals – and products – and includes a mechanism for systematically eliminating the most hazardous chemicals in favour of safer alternatives.

Echoing the position of the chemical industry, the Bush Administration has disseminated documents critical of the EU reform proposals, claiming that cost of increased scrutiny would burden US businesses and hinder competitiveness.

The public interest groups maintain that the cost of reforms is

minuscule compared to billions spent on health care, pollution control, and clean-up from chemical contamination.

"The European chemical industry would have us believe that the new EU chemicals management REACH harms their competitiveness, while the US government argues that it would harm THEIR competitiveness. There is something obviously wrong. More likely is that EU's chemicals policy reform will create new markets for companies that employ cleaner processes to create cleaner products", said John Hontelez, Secretary General of the European Environmental Bureau.

The Stockholm Convention on Persistent Organic Pollutants (POPs) has now been ratified by 23 countries. But the US, along with Russia and Denmark, have still not ratified.

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Wildlife health research and the influence of contaminants in Nunavut

WWF-Canada is taking arctic contaminant research to a new level. During the past decades, extensive research has been conducted in the Arctic to identify and quantify anthropogenic contaminants in arctic ecosystems. However, little research has been conducted on the health status of wildlife populations in relation to contaminant body burdens. WWF-Canada is filling this knowledge gap by pioneering a new research project in collaboration with Inuit communities in Nunavut, and Trent University – The Nunavut Wildlife Health Project (NWHP).

This pilot project has been designed to integrate traditional knowledge with scientific methods to assess the health status of wildlife in three northern communities (Figure 1).

In addition, NWHP intends to initiate an action plan to enable the Inuit to develop policies and risk management options tailored to the needs and desires of individual communities.

Through thousands of years of observation, Inuit have amassed an intimate knowledge of what constitutes a healthy or unhealthy animal. It is hoped that this knowledge will help scientists to enhance their ability to identify subtle changes in wildlife health status that may be otherwise missed by conventional scientific methods.

The transfer of traditional knowledge, and community involvement are two of the most important aspects of the NWHP initiative. The project began with community consultations, which led to significant contribution to the design of



Figure 1. Locations of three arctic communities, Arviat, Coral Harbour, and Pangnirtung

the study (Figure 2). Currently, thirty experienced hunters from the three communities are participating in the Inuit traditional knowledge survey. Their wealth of knowledge regarding wildlife health is being documented through personal one-on-one interviews.

The second part of the project is to initiate an investigation on contaminant body burdens and wildlife health status. During the fall of 2002, training workshops were conducted in the communities to generate a baseline assessment of wildlife health (Figure 3). Currently, organ and tissue samples from arctic char, ringed seal and beluga whales from each of the three communities are being collected to investigate the contaminant levels and to examine histological conditions of specified tissues (e.g. liver, adrenal glands, etc.) in each animal. It is anticipated that it will take several years of data collection in order to determine if contaminant levels are significantly impacting wildlife health.

The third component of the project is to engage hunters in documenting the health condition of their harvests, including polar bears, beluga whales, ringed seals, walrus, caribou and arctic char.



Figure 3. Training workshop for hunters

The main goals of the NWHP are:

1. To engage communities in actively participating in scientific research;
2. To link traditional knowledge with modern scientific methods;
3. To promote community education and development; and
4. To document the health status of selected species and to investigate the influence of anthropogenic contaminants in arctic wildlife communities.

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Figure 2. Dialogues with community stakeholders

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Focus on sustainable development

An interview with Gunnar Pálsson

Ambassador Gunnar Pálsson, former Icelandic Ambassador to NATO and the UN, is the new chair of the Senior Arctic Officials of the Arctic Council. Samantha Smith, director of the WWF International Arctic Programme, interviewed him about Iceland's hopes for the Arctic Council.



very long time. Before the actors, that are now members, had worked together for five years on environmental issues under the so-called Arctic Environmental Protection Strategy. With the establishment of the Council the cooperation of its members was expanded to cover economic and social concerns as well as environmental issues. As a result, the Arctic Council has gradually been transformed into a forum for cooperation on sustainable development in the arctic region.

During Iceland's term in the Chair, the continuation of the Arctic Council's environmental work will be emphasized. The environment remains a crucial area of concern in the circumpolar region. However, since co-operation on the other pillars of sustainable development, ie the social, economic and cultural ones, is not as well established, we have chosen to highlight those aspects in particular in our chairmanship program.

There are reasons to believe that in ten years' time the environment will still be the focal point of the Arctic Council's work. By then, climatic changes might, for example, be having an even more visible impact on the economic and social conditions of the inhabitants of the Arctic. Not least for that reason are we also going to need a more comprehensive approach to sustainable development in the region as a whole.

■ ■ *What are some concrete examples of sustainable development in the Arctic?*

The overall goal of sustainable development is to establish the right balance between man and nature, between safeguarding nature's resources and utilising

them for the economic needs of society. To attain this goal requires continuous effort by individuals, businesses, local and regional authorities and government. We could all cite examples of success in different areas, but overall this work is never complete.

Different member states could, no doubt, tell stories of success, where individual projects have contributed to sustainable development. Eco-tourism and the use of renewable energy resources for industry could be mentioned as examples. The successful efforts that have been made to create a foundation for sustainable reindeer husbandry provide yet another example. In my country, many would point to our system of fisheries management as an excellent example, where the right balance has been struck between conservation and use.

A cross-cutting theme of the Arctic Council over the next ten years will be capacity building.

...in ten years' time the environment will still be the focal point of the Arctic Council's work.

■ ■ *The Program for the Icelandic Chair of the Arctic Council (2002-2004) states that "[p]rogressive cooperation of the Arctic Council on economic, social and cultural issues is essential". What issues should be on the Council's agenda in ten years (2012)? What will be the role of environmental issues?*

The Arctic Council, founded in 1996, has not been around for a

Through its work, the Council can assist people and institutions at all levels of society to transform knowledge and visions into integrated action that reinforces sustainable results.

■ ■ *The arctic countries are at work now on the Arctic Climate Impact Assessment (ACIA). ACIA will*

include a scientific assessment, which will describe the current and anticipated effects of climate change in the Arctic, while a parallel process will develop policy recommendations for arctic governments. Do you anticipate any difficulties in completing the ACIA by 2004? Will there be a 'mini' Arctic Council Ministerial meeting in 2003 to discuss the progress of the ACIA, as Norway suggested?

Work on the ACIA is on schedule. The ACIA Assessment Integration Team met in November to discuss,

... the management of the [fish] stocks themselves is, in the view of some members of the Arctic Council at least, best left to those who have most at stake in conserving them.

inter alia, the first draft of the scientific volume, the peer-review process and the drafting of the synthesis document. The distillation of recommendations from the scientific volume, to be included in the policy document, will begin early next year. The documents should be finalized by the Ministerial meeting in 2004 and we will certainly work hard to reach that goal.

A suggestion to organise an additional Arctic Council Ministerial meeting in 2003 was made at the Ministerial meeting in Inari. It is, in the first instance, a matter for those who made the suggestion to follow it up, if they so wish.

■ ■ *Fisheries are a key economic sector for many of the arctic countries, including Iceland. From an environmental point of view, over exploitation of fisheries has the greatest impact on the arctic marine environment of any human activity. Yet the Arctic Council addresses fisheries issues only through a single, relatively small project. Should the Council broaden its work on fisheries, and if so, how?*

The living resources of the oceans are an essential part of the ecosystem in the Arctic. Over exploitation is one of a number of dangers that could threaten those resources and should therefore be dealt with through the competent regional and international bodies.

The Arctic Council could broaden its work, for example by encouraging greater scientific research on phenomena that could impact fish stocks, such as trans-boundary pollution and climate change. By contrast, the management of the stocks themselves is, in the view of some members of the Arctic Council at least, best left to those who have most at stake in conserving them. Regional organisations, for example the North East Atlantic Fisheries Commission (NEAFC) and the Northwest Atlantic Fisheries Organization (NAFO), that are recognized under international law, have been set up to that end.

■ ■ *From WWF's point of view, an essential part of conservation is balancing protection of nature with development. We advocate a principle we call 'Conservation First' - protection of representative and sensitive areas before development starts. The arctic countries have an opportunity to put this principle into practice, through creating the circumpolar network of protected areas (CPAN) to which they committed themselves in 1997. As chair of the Arctic Council, will Iceland make implementation of CPAN a priority?*

The Arctic Council's Working Group on the Conservation of Arctic Flora and Fauna (CAFF) is dealing with the issue of circumpolar networks of protected areas through a sub-group of experts constituted by members of the Council. When it is ready, the Working Group will present its recommendations to the Senior Arctic Officials. I am sure the Chair will want to give those recommendations the attention they deserve.

As regards the implementation of CPAN, we should bear in mind that the Arctic Council is without legally binding instruments. It is up to each and every member state to carry out the recommendations that the Ministers have endorsed.

New ICC chair

Sheila Watt-Cloutier is the new chair of the Inuit Circumpolar Conference, the international organisation which represents about 155,000 Inuit living in the arctic regions of Canada, Alaska, Greenland, and Chukotka, Russia. She was elected to the position in August 2002.



The first executive council meeting under her command is scheduled for early January.

Priorities for the ICC are the environmental contaminants

issue and climate change.

Watt-Cloutier says when tackling such massive issues, you have to go into meetings with a political strategy and make sure you can propel the issue to another stage.

"The environment is a priority because it's all absolutely connected to who we are culturally," she says. "Inuit haven't removed themselves from the land either physically or spiritually.

"We haven't disconnected and we don't have hundreds of years, or even a hundred years of being entrenched in institutions. We are connected still to the source. We are connected to the pulse of the land. It still is very much what drives us to make changes for us as a people.

"Because we are a people who are on the land and snow every single day, we witness the most minute of changes and we are scientists in our own right. The world has a vested interest in keeping us on the land because we are the guardians."

The text for this story is an abbreviated version of a feature in *Nunatsiaq News*, November 8th, 2002.

Through the window

Foto: WWF-Canon/Klein & Hubert



Senior Arctic Official Ole Samsing and Acting Deputy Minister Mikaela Engell map the progress of the European Union's Northern Dimension and Greenland's 'arctic window'.

The success of the European Union's (EU) Northern Dimension has prompted widespread interest inside and outside the EU.

The Northern Dimension is a policy and an action plan adopted by the EU at the Feira Summit in June 2000 (see box). The current action plan covers the period to the end of 2003.

The Danish presidency of the EU has together with seven partner countries (Russia, Poland, the Baltic countries, Norway and Iceland) prepared guidelines for a revision of the action plan for the Northern Dimension at two ministerial meetings in respectively Greenland and Luxembourg in August and October 2002.

The guidelines mention – among other things – the Arctic as a cross-cutting theme. The actual formulation of the new action plan, to be implemented from January 1st, 2004, is now in the hands of the

European Commission and Greece, which holds the EU presidency following Denmark.

EU member states, present and future ones, are, together with the Commission and other partners, committed to enhance co-ope-

ration in northern Europe, with Russia and in the northern hemisphere in general. With the accession of a number of east European countries into the EU in the years to come, north-west Russia will be in focus – and a great part of this area is in the Arctic.

But the Northern Dimension is more than an action plan. It is also a forum for joint work on setting priorities and for co-ordination of actions. The purpose is to use the

Icebergs in Kong Oscars Fjord, Greenland National Park .



Foto: WWF-Canon/Peter Prokosh

Sustainable use: one of the annual quota of Fin whales is divided on an island close to Nuuk, South Greenland.



Photo WWF-Cannen Klein & Huber

Arctic fox, *Alopex lagopus*, on a melting ice pack, Greenland National Park.

resources available to the best effect. This aspect will be more prominent in the new plan period and the regional councils, such as the Arctic Council, will be expected to play a larger role.

So what is the Arctic Window?

The process has until now been influenced by a Greenlandic invention, which was also the headline of the Greenlandic contribution “An Arctic Window in the EU Northern Dimension” to the ministerial conference in Greenland in August.

Mikaela Engell, acting Deputy Minister for Foreign Affairs in the Greenland Home Rule Government, says: «Some confusion has arisen from our invention of this concept – but actually the concept is very simple and very straightforward. What we talk about is co-operation and about sharing hard-learned experience.

We base our policies on these simple wishes both in relation to the EU and in relation to the world at large.”

“Greenland has, in its contribution to this year’s work on the EU Northern Dimension, pinpointed a number of specific areas in which the Arctic might benefit from more attention in the years to come.”

The priority areas identified within the present Action Plan which have the most relevance to the Arctic have been:

- Economic development of sparsely populated areas
- Environment and natural resources
- Development of human resources
- Telecommunication and Information Technology Societies and Research.

“The review was deliberately seen from the perspective of Greenland – the ‘window’ – not part of the Union – but nevertheless firmly established as an autonomous area within an EU member country,” said Mikaela Engell.

“I’ve often been asked whether Greenland’s drive for the arctic window has been based on purely altruistic motives. The answer is ‘yes’ and ‘no’. ‘Yes’ because Greenland has been and still is under a very high pressure for adapting to ‘modernity’: we know what other societies in the Arctic are facing, and we might by our example make the transition a bit easier. ‘No’ because it is our general policy to increase knowledge and interest in the Arctic.

“The Arctic forms a natural part of the world and should be recognised as such. The Arctic is a cross-cutting theme, and it is home to many societies. We work to promote the general interests of the Arctic and its various societies not only in the Arctic Council and in the UN, but also in a EU context, wherever relevant and pertinent.”

Ole Samsing is the Danish Senior Arctic Official, Ministry of Foreign Affairs, Denmark.

Mikaela Engell is Acting Deputy Minister for Foreign Affairs, Greenland

■ The Northern Dimension is part of the EU’s external and cross-border policy framework with a specific aim to raise the Union’s profile in Northern Europe. It is conceived as a way of working with the countries of Europe’s northern regions to increase prosperity, strengthen security and resolutely combat dangers such as environmental pollution, nuclear risks and cross-border crime.

■ The Northern Dimension covers the following geographical area: from Iceland to the west across to North West Russia, from the Norwegian, Barents and Kara Seas in

the North to the Southern coast of the Baltic Sea. Non-EU countries that fall within its scope are Estonia, Latvia, Lithuania, the Russian Federation, Poland, Norway and Iceland.

■ The Northern Dimension aims at addressing the special regional development challenges of northern Europe. These include harsh climatic conditions, long distances, particularly wide living standard disparities, environmental challenges including problems with nuclear waste and waste water management, as well as insufficient transport and border crossing facilities. Northern Europe has a lot

of potential and is rich with natural resources.

■ The Northern Dimension aims to intensify cross-border cooperation between the EU and its neighbouring countries and regions in northern Europe. It aims to create security and stability in the region, as well as building a safe, clean and accessible environment for all people in the north. The Northern Dimension also has the objectives of addressing the problems related to uneven regional development and avoiding the emergence of new dividing lines as new countries join the Union.

■ In the coming years, with the enlargement of the

Union to Poland and the Baltic States the importance of the Northern Dimension will increase. The Baltic Sea will be surrounded by EU Member States, and the EU’s common border with Russia will be extended. In this context, the focusing of support to the Northern Dimension area helps the enlargement process, and prepares the EU for the future, when its external border will have moved beyond the Baltic States.

For more about the history of the Northern Dimension, its role and future plans, visit http://europa.eu.int/comm/external_relations/north_dim/

How to develop the north: ask the locals

Northern development initiatives in Canada's western Arctic: can we get it right? Peter Jalkotzy reports.

I had returned to Aklavik after almost 20 years. It was August 2000. I was there to conduct public information sessions with the local community on petroleum exploration plans. I had spent a couple of seasons in the Mackenzie Delta region of northern Canada in the early 80s, live-trapping muskrats through the summer and winter as part of a population study. During the course of the meetings in 2000 I was talking with local participants about my experiences in the north. I was proud of my 'on-the-ground' experience from years gone by. Then one local said: "Oh, that was you: you southern scientists should have just come and talked to us – we could have told you all you needed to know!"

The use of local knowledge will become increasingly important in Northern Development Initiatives (primarily exploration and development of oil and gas reserves, including seismic surveying and drilling, but also mining and tourism.)

Possibly, a greater challenge will be how to obtain accurate information commonly referred to as traditional knowledge. And how does this information relate to areas that have been historically important to the people that have lived on and off the land for centuries? Related discussions have been circulating that an important component of the structural framework for appropriate northern development will include a network of protected areas.

The Inuvialuit of Canada's western Arctic have made some significant progress in this regard. The three cornerstones to the Inuvialuit Final Agreement (IFA) are economic development, local capacity building and protection of the environment or,

taken together, a three-tier and sustainable approach to development in the north (ie economic, social and environment).

A paramount message throughout the document is the "... meaningful participation ..." of local people and their communities. This agreement also specifies the formation of a variety of co-management boards and advisory committees. The Inuvialuit Game Council (IGC), Fisheries Joint Management Committee (FJMC), Wildlife Management Advisory Council (WMAC), Environmental Impact Screening Committee (EISC), and the Environmental Impact Review Board (EIRB) have all played a very important role in achieving the mandate of the IFA. The integration of their activities with the more traditional and



Inuvialuit mother and daughter.

centralised territorial and federal government departments has created a rigorous review process for the permitting of development activities.

Under the umbrella of the IFA, additional measures of guidance come from the completion of Community Conservation Plans (CCP). Each community (Aklavik, Inuvik, Tuktoyuktuk, Sachs Harbour, Paulatuk, Holman Island) has taken enormous effort to compile and document the areas within their described region that have traditional importance for subsistence activities (ie trapping, whaling, berry picking, hunting, fishing, cultural, medicinal and spiritual). Five categories of increasing limitations to the types of appropriate activities are clearly spelled out and upheld. Additionally, and particularly important, often referred to as 'sacred area', the Husky Lakes region has been identified to receive special consideration. A preliminary Management Plan has been drafted that recognises the area's significance and attempts to outline development protocols and protection zones.

The federal and territorial government also has granted protection to areas through the national parks system, special management areas, sanctuaries and other designations, such as the Old Crow Flats Area East. There are plans for additional protected areas through the Marine Protected Areas program.

What is the collective outcome of such initiatives? Most importantly, the rules become clear, and the local communities and proponents of development gain a greater degree of certainty. Additionally, there is a much greater sense of cooperation and collaboration amongst the local people and exploration companies. Protected areas or not, the general sense is that the current development initiatives must minimise footprint, and maximise the use of new technology. There is a common recognition of the current (relatively) undisturbed state of the land, and the need to proceed with caution. However, a strong and effective framework has been initiated. Additional effort to expand the understanding of the value of an integrated network of protected areas and their geographical extent will encourage further advancement of environmental protection in Canada's north.

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Mackenzie River.



Willow and evergreen.

Charting a course in the Beaufort Sea: integrated management planning



Oceans Day celebrations, July 2002, Tuktoyaktuk.

The Beaufort Sea faces looming oil and gas development and an increase in fishing and shipping activity. The region needs protective measures to maintain its relatively healthy and vibrant ecosystem. WWF-Canada is confident that firm protection measures can be put in place as part of these new developments. Mike Preston reports.

The Beaufort Sea lies mainly in Canada's western Arctic. It's home to hundreds of thousands of ringed seals, thousands of polar bears and bearded seals, an endangered bowhead whale population, 41 species of fish, and provides seasonal habitat for over two million birds. And there is still more to discover. Satellite tagging research now shows that beluga whales and ringed seals from the Beaufort travel to Russia and Alaska – far greater ranges than previously thought (see www.permafrost.com/seals).

The abundant wildlife provides the Inuvialuit people, who mostly inhabit coastal communities in the Beaufort region, with a subsistence living that has supported them through millennia. The Inuvialuit are aware that wildlife harvesting still contributes substantially to their quality of life. This awareness is reflected in their 1984 land claim settlement under which Inuvialuit/government co-management bodies were established, ensuring Inuvialuit participation in wildlife management and environmental assessments.

In 1991, the co-management body that oversees fisheries and marine mammals, the Fisheries Joint Management Committee, developed guidelines that designated seven marine zones where development

should not be permitted.

Three of these zones are immediately north of the Mackenzie Delta – the region that has seen the most oil and gas exploration. A committee, and associated working group, known as the Beaufort Sea Integrated Management Planning Initiative (BSIMPI) has responded to the urgent need for ecosystem based planning before the foreclosing of options that allow for conservation to be properly balanced with development. BSIMPI has representative members from:

- Fisheries Joint Management Committee
- Inuvialuit Regional Corporation
- Inuvialuit Game Council
- Federal Department of Fisheries and Oceans
- Canadian Association of Petroleum Producers

This management system, popularly known as Integrated Management, has the potential to effectively incorporate economic, cultural and ecological considerations by reflecting the interests of all stakeholders. The committee is currently evaluating the merit of legally protecting the three Mackenzie Delta Beluga Management Zones. ➤



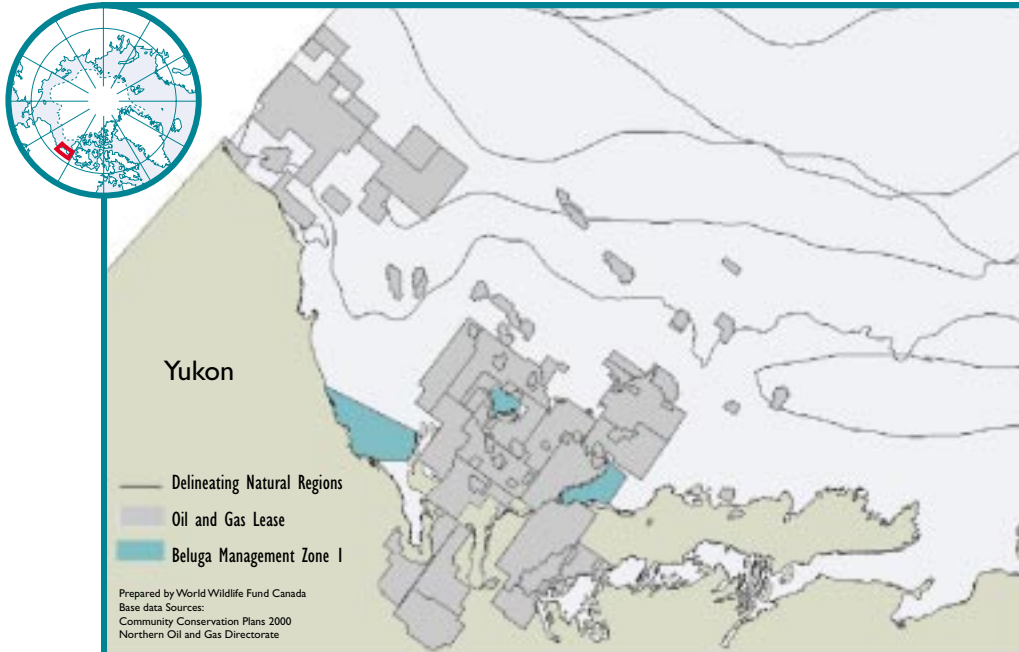


Figure 1: Map of Southern Beaufort showing oil and gas leases and Beluga Management Zone I areas

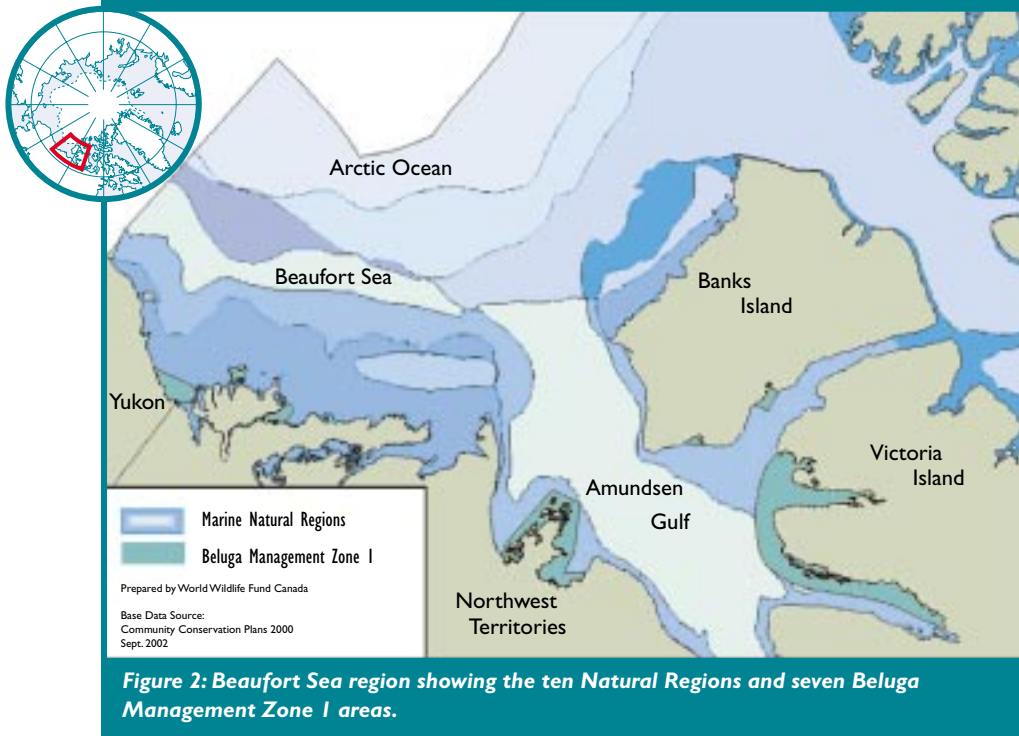


Figure 2: Beaufort Sea region showing the ten Natural Regions and seven Beluga Management Zone I areas.

➤ Marine Protected Areas, and zonation of appropriate uses, are a pragmatic management tool for striking a balance between conservation and development by separating incompatible activities. This is the approach favored by industry, local residents and government in large marine ecosystems like the Great Barrier Reef and Barents Sea. WWF led the development of a dynamic national classification system for Canada's marine regions,

and this has been widely received by governments and industry. WWF's goal is to complete, by 2010, an adequate system of representative Marine Protected Areas in all 78 of Canada's marine natural regions, including the ten marine natural regions in the western Arctic. This is consistent with the recent international commitment made at the World Summit on Sustainable Development in Johannesburg to complete a global representative

network of Marine Protected Areas by 2012.

There are numerous mechanisms for creating Marine Protected Areas and considerable momentum in Canada to do so. This national momentum overlaps with the old Inuvialuit saying, "If we look after our resources, our resources will always look after us."

Exemplary principles of conservation have been put into practice in the Inuvialuit Settlement Region. For example, 18 per cent of the terrestrial lands in the settlement are fully protected. However a key question remains: will the same degree of full protection be applied to important ecological areas in the marine component?

In the Beaufort Sea, unlike many other marine areas worldwide, there is still the opportunity to identify and reserve key, ecologically representative areas for protection, as well therefore as key areas zoned for appropriate development of economic opportunities. Through such advance planning, it is possible to achieve the greater certainty sought by all.

Stakeholders in the Beaufort Sea include the Inuvialuit, industry, investors, conservation groups and government. Indeed, they all share a common vision of economic prosperity while maintaining the integrity of the surrounding environment. Now that these groups have been brought together, there is an opportunity to develop marine conservation for the entire Beaufort Sea in the same manner that was applied to the lands in that region. If that same pioneering path is followed, then WWF-Canada is confident that their vision will be realized.

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Inuvialuit women from Tuktoyaktuk in fish-cleaning contest.

Monitoring the Arctic at the foot of Table Mountain

Robben Island, ten kilometers offshore from Cape Town in South Africa, is best known as the place where Nelson Mandela was imprisoned during the apartheid era.

The island became a World Heritage Site in 1999, motivated by its cultural significance.

The entire island now forms the Robben Island Museum. Although it is visited by hundreds of thousands of tourists annually, keen to be taken on a tour of the prison and a bus tour which includes about

Connected to the Arctic



1km of the 10km of coastline, overall levels of disturbance on the shoreline have probably decreased since prison times.

On the biological side, Robben Island was identified as an Important Bird Area in 1999. It could easily enjoy Ramsar status, because of its shorebird and seabird populations – the Ramsar definition of wetland includes the shoreline and adjacent sea.

It has connections with the Arctic too. Substantial numbers of waders, mainly from the Siberian tundra, migrate to Robben Island to escape the northern winter.

Because the entire island forms part of the museum, the shoreline is unlikely to be modified in any way and is unlikely to be subject to changes in human disturbance. Thus Robben Island could qualify as part of a network of 'remote' sites

that would be used to monitor population trends of arctic-breeding birds such as ruddy turnstones *Arenaria interpres*, curlew sandpiper *Calidris ferruginea*, sanderlings *C. alba* and whimbrels *Numenius phaeopus*. The first three of these species are known to migrate to southern Africa from the tundra; the third breeds farther south, in the taiga.

In the past few years, staff and students from the Avian Demography Unit at the University of Cape Town, assisted by Earthwatch volunteers, have done several shorebird counts per year on Robben Island. We have published the results of the first few surveys (LG Underhill, PA Whittington & KM Calf 2001 Shoreline birds of Robben Island, Western Cape, South Africa, *Wader Study Group Bulletin* 96: 37–39).

If these counts are compared with a single count done in December 1980, the results are worrying. Turnstone numbers are down from 517 to about 250 maximum, curlew sandpipers from 339 to about 150, and sanderlings from 88 to only occasionally seen. Whimbrel numbers have held steady. Unfortunately, the 1980 survey is the only one until December 1998.

Clearly, results from a single site merely provide an anecdote. But if the anecdotes from a good sample of sites tell the same story, then a pattern emerges. Even better, we should devise a system which does not rely on anecdotes, but on the assemblage of data from a wide network of representative sites covering all the regions to which arctic-breeding waders migrate.

Besides the scientific value of such a project, it could have considerable educational and awareness impact. Imagine the impact if each



Photo: On Flyum

visitor to Robben Island were told that, besides all the other interesting things that happened here, it formed an important part of a network of sites to monitor the Arctic, 15,000km away.

Our research on Robben Island is supported by the Earthwatch Institute and the Darwin Initiative. The Robben Island Museum and the Marine and Coastal Management Branch of the Department of Environmental Affairs and Tourism provide logistical support.

LES G UNDERHILL, Avian Demography Unit, University of Cape Town, Rondebosch, South Africa 7701 (lgu@adu.uct.ac.za)

Robben Island seen from the top of Table Mountain in Cape Town.



Children in the Meyenpylgino settlement, Beringovskiy region, Russia.

Taking a Bering

WWF-US and WWF-Russia are working to preserve the Bering Sea ecoregion. Anisia Shepeleva, co-ordinator of the Bering Sea ecoregion (WWF-Russia) reports on the project, which includes Alaska, Chukotka, Kamchatka, the Commander Islands and Aleutian Islands.

WWF's Bering Sea ecoregion project covers four working areas: ecological education, sustainable tourism, preserving species and protected areas.

In Russia, we attach special significance to the ecological education of our children. They are, after all, our future, and we hope that when they grow up, they will care for and uphold and implement our ideas about the inseparable link between indigenous people and nature and about sustainable use of land.

So far we have established

around 50 children's clubs in Russia. In Chukotka, for example, there are now ten children's clubs: three in Anadyr, one in Providenia, two in Pevek, one in Bilibino and three in Lavrentia. The head of the Chukotka district administration, Mikhail Zelensky, (the part of Chukotka closest to Alaska) has even become an honorary chairman of the WWF friends' club in the area. Children in the clubs study the nature and culture of their native land and, in summer, take part in special ecological camps.

Children's clubs have also been established in Alaska. The children from Chukotka and Alaska are already planning to become 'pen friends' and take part in joint activities to study and conserve the Bering Sea area.

The development of ecological tourism in the region is also very important from an economic and conservation point of view. We are cooperating closely with the government of Chukotka, which supports the idea of developing ecological tourism in the region. In 2003, we are planning to hold a



The Illiryskie lakes, Bilibino region, Russia.

workshop on tourism development in Chukotka's town of Anadyr. We hope it will be attended by foreign and Russian experts.

And in the summer we are also beginning a model project to develop eco-tourism in Lavrentia, in which local people, the government of Chukotka, scientists, and WWF experts will take part.

In 2002, WWF, together with the Wrangel Island reserve, started a project to prevent the illegal hunting of polar bears. According to experts from IUCN, the Chukotka-Alaska population of polar bears is now around 5,000. The population is spread over a huge territory: the Sea of Chukotka, the eastern part of the East-Siberian Sea and the northern part of the Bering Sea. Despite the fact that the hunting of polar bears is strictly forbidden, around two to three hundred bears are killed in the Russian Arctic every year, particu-

larly on the Chukotka coast.

WWF-Russia has been running a public information campaign to try and involve the local population in helping to preserve polar bears. And we also have plans to organise new protected areas along the coast in the near future.

At WWF's initiative, activities were carried out in 2000 and 2001 to include the Wrangel Island reserve in the list of UNESCO's World Heritage. The documents were approved by the Russian Government and submitted for consideration to the UNESCO's office in Paris.

One of the main directions in the work of the WWF is to organize in Chukotka the first federal national park, Beringia, in the territory of Russian Arctic.

WWF experts have talked with the administration of the district and the heads of local administrations, and the leaders of the Russian



Ministry of the Environment about how such a park would come into existence. WWF is funding the work of the project group.

In 2002, WWF, together with the Chukotka administration, also began to work to establish local natural reserves. There are plans to establish reserves in the Chaunsky district at Pegtymelsky and Chaunsky itself, and another protected area, Omolonsky, in Bilibino district.

Hunters from the Inchain settlement, Chukotsky region, Russia.

Oil and gas on the Arctic Shelf

WWF-Russia's Vassily Spiridonov reports on the Arctic Shelf Oil and Gas Conference in Murmansk.

A few maritime towns in Europe are well-known as venues for offshore oil and gas development meetings, including Aberdeen in the UK and Stavanger in Norway. You can now add Murmansk in Russia to that select list. Between November 13th and 15th, the

administrations, in particular, the Administration of the Murmansk Area and the leading industry stakeholders.

Ivan Glumov, the deputy minister for natural resources, said the applications will be called in 2003, while Mr. Alexander Selin, the

Remarkably, Glumov did not list ecological challenges amongst those confronting offshore development: the environment was conspicuously absent from a list, which included geopolitical, legal, resource assessment, information, technology and management. Is this an indication of the way today's Ministry for Natural Resources (which swallowed a national environmental authority in 2000) treats environmental issues?

A special workshop chaired by Prof. Gennady Matishov was dedicated to geo-ecology and the environmental problems of the offshore oil and gas development in the western Arctic.

Several presentations showed that the areas proposed for offshore oil and gas development and transportation are largely 'clean' and, at least for the Barents Sea, background information exists which makes it possible to monitor the environmental impact of the offshore industry and shipping.

It is important that this monitoring not only uses traditional methods, which use research vessels as platforms, but also uses modern technologies based on multi-channel surveys using the flying laboratory (Antonov 26) of the Polar Research Institute for Marine Fisheries and Oceanography (PINRO, Murmansk).

The first results of the assessment and monitoring of sea birds in the Pechora Sea (Krasnov et al., 2002) have been recently published (see review in this issue): This emphasized that an aerial survey is an effective tool for monitoring and adaptive management when offshore development is progressing.

A comprehensive presentation by an international group headed by Prof. Gennady Matishov and Dr. Gennady Ilyin (of the Murmansk Marine Biological Institute - MMBI) covered oil spill 'behaviour'. Currently the effects of small scale



The Arctic Shelf Conference held most of the sessions in the building of Arctic Marine Neftegaz Razvedka (AMNGR). The state owned corporation was one of the conference's main sponsors.

biggest city north of the polar circle hosted the Arctic Shelf Oil and Gas 2002 conference.

The conference was held against a background of political, institutional, financial and research and development uncertainties. And there are still serious problems in estimating resources, partly due to scientific problems and partly to state institutions' almost complete phase-out of the resource assessment process. The private sector has done little so far to rectify this.

An observer might also have noted the differing positions expressed by the Ministry for Natural Resources, the Ministry for Fuel and Energy, the regional

first vice-governor of Murmansk, expressed doubt. However, as a representative of the Ministry for Fuel and Energy said: "Every time a conference like this takes place, something really does happen in the real world of offshore oil and gas development."

Ivan Glumov, a well-known proponent of the offshore oil and gas development, said that the Ministry for Natural Resources has developed a programme of licensing for 44 fields. He also expects that new legislation will be adopted in 2003, which could provide the transparency in licensing procedure and secure the use of national marine technologies.

Oil transportation in the Barents Sea

oil spills and other kinds of oil pollution may be observed in several areas of the Barents Sea: in the Kola Bay and off Vaigach Island where an oil terminal has been in operation for four years.

In the prospective areas of development, such as the Prirazlomnoe field, it is possible to model the behaviour of an oil spill. The models demonstrate the oil spill may be advected in any direction with near equal probability. On the other hand there is serious doubt that oil spill facilities will be effective if a large oil spill happens near Murmansk, not to say the Pechora Sea.

Dr. Vladimir Denisov of MMBI presented an analysis of compatibility of the offshore oil and gas development and the Barents Sea fisheries which calls for a comprehensive assessment of combined environmental impacts. He emphasized that the fisheries impact may be much greater than non-accidental impact of the offshore industry but it remains more difficult for assessment.

The presentation made by WWF was based on the biodiversity assessment of the Barents Sea Ecoregion. We used the Assessment as a starting point and developed preliminary proposals for the marine protected areas (MPAs) in the southern and the eastern Barents Sea. The concept was well accepted and in preliminary discussion some environmental specialists from Russian oil companies agreed that planning of MPAs should be done with participation of major stakeholders. However, again the discussion revealed inevitable deficiencies in any approaches to environmental issues in the offshore oil and gas development in the absence of strategic environmental assessment.

Murmansk, on the Barents Sea in Russia, is shaping up as the oil boom town of early 21st century.

Experts believe the Russian port will soon be an important link between Russia and America and that the first supertankers could be sailing from her harbour as early as next year.

In November, Russia's four top oil companies announced they planned to sign a preliminary deal to build a one million barrels-per-day oil export terminal in Murmansk

Executives from LUKoil, Yukos, TNK and Sibneft, which together produce more than a half of Russia's crude, have signed a memorandum of understanding.

Oil is expected to come to Murmansk primarily from the Timan-Pechora fields, either by ice-strengthened tankers, which have loaded at the Varandei terminal, or via a proposed pipeline from Yaroslavl to Arkangelsk then across the Gorlo of the White Sea and Kola peninsula to Murmansk.

There are also proposals to modernise an existing pipeline – Ukhta-Yaroslavl – which transports oil from LUKoil fields in the Komi Republic.

Yukos has declared its intention to build its own pipeline from Nefteyugansk via Ukhta (in the Komi Republic) to Murmansk.

Vassily Spiridonov of WWF-Russia said: "Make no mistake: sooner or later, marine transportation of oil in the Arctic will come to pass. Safe transportation with minimum pollution poses a great challenge for marine environmental science and environmental organisations. We need to find effective ways of interaction with business, industries and politicians."

Alexander Kursky, an adviser of the State Duma Committee for industries, construction and technology, estimates the cost of construction at around one billion



Murmansk - starry future?

US dollars for the modernisation of the existing pipeline and around four billion US dollars for the pipeline proposed by UKOS.

The plans will not require huge investment in Murmansk. Changes in port infrastructure and additional safety features are required as are storage facilities.

The port is the only one which can load tankers of 200,000 tonnes deadweight.

LUKoil currently builds ice-strengthened tankers at the shipyards of Germany and St.Petersburg while another European programme for large-scale marine oil transportation was presented by a group of Finnish businessmen and governmental representatives at the Arctic shelf conference in Murmansk in from November 13th to 15th.

The newly started ARCOP project is intended to demonstrate the development of the capacity of the Northern Sea Route.

It calls for the development of routing and remote services recognising environmental issues as key issues in marine transportation.

Last year nearly 270,000 tonnes of crude oil were exported via the revamped LUKOIL-operated Varandei terminal in the Nenets Autonomous District. The terminal is the only stationary terminal for oil transportation and transport is expected to grow.

Other terminals, such as the one on Kolguev Island are functioning on a temporary basis.

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Photo: Johnny-Leo L. Jernsletten

Is there a future for reindeer husbandry?

The first stage of the Arctic Council's Sustainable Reindeer Husbandry project comes to an end in 2002. The project is believed to have been the first to focus on the circumpolar reindeer industry as a whole. Johnny-Leo L. Jernsletten, Project Manager, at the Centre of Sami Studies, reports on the project and its recommendations.

Reindeer husbandry faces major challenges today, but despite this, there is impressive optimism in the industry. During our research, we did not meet one reindeer owner who had considered giving up reindeer husbandry – even in areas where the industry is under severe pressure. Reindeer owners want to stay in the industry and there is clearly an increasing awareness of the market potential of reindeer products. There is also a growing awareness that it's possible to add value locally to different reindeer products.

But before I outline further recommendations, let me begin by outlining the original aims of the Sustainable Reindeer Project and how it came about.

At the first ministerial meeting of the Arctic Council in Iqaluit,

Canada, 17–18 September 1998, the former Norwegian Foreign Minister Knut Vollebæk focused on how different arctic industries, such as oil and gas, fisheries and reindeer herding, related to sustainable development. He said Norway would initiate international workshops on these three themes. The workshop on reindeer husbandry was held in March 2000 in Kautokeino, Norway. The Sustainable Reindeer Husbandry project resulting from this meeting was approved by the Arctic Council as a project under the Sustainable Development Program at the Arctic Council Ministerial meeting in Barrow, Alaska, in October 2000.

The aim of the project was to assess the economic, social and cultural sustainability of circumpolar reindeer husbandry. A

thematic survey and assessment of reindeer husbandry in the Arctic regions of Sweden, Finland, Norway, Russia and Alaska then followed. Based on this, we prepared an analysis of the current state of the circumpolar reindeer husbandry. We organised the review around four main themes:

- (a) Economy connected to household, family and community
- (b) External conditions affecting reindeer husbandry
- (c) National management of reindeer husbandry
- (d) Legislation

Between May 2001 and April 2002, we conducted field trips to different parts of Russia, Alaska, Norway, Sweden and Finland. During these trips, we collected the latest available national statistics and information about reindeer husbandry, management policy and plans, and predators, as well as scientific papers about the status and trends in reindeer husbandry. We also interviewed reindeer herders and owners, bureaucrats and researchers in Sweden, Finland, Russia, Alaska and Norway.



Photo: Konstantin Kibbey

The international focus of the project gave us some interesting findings. Almost all the persons connected to the industry brought our attention towards the loss of pastures. The causes behind the loss of pastures differ between the regions and the countries. They include infrastructure development, forestry, international borders, heavy grazing and trampling by Caribou.

The other important challenge the industry is facing today is from predators. The focus was on the number of predators in an area and the management of them. It is not a question of predators or reindeer, but how should this conflict of interest be managed in a sustainable way.

In conclusion, the industry is facing challenge, but, as I have said, there is great optimism.

Recommendations

The final report, which was presented to the Ministerial meeting in Finland in October 2002, reflects some of the main challenges for sustainable development of reindeer herding communities, and gives recommendations for action to the industry, national authorities, and the Arctic Council. The report and the International Steering Committee:

- Recognises that there is concern that the viability of traditional reindeer husbandry is deteriorating throughout much of the circumpolar North and that there is a risk that this form of land use will vanish altogether in some areas. Special efforts by member countries are required to rectify this situation.
- Encourages the Arctic Council to acknowledge the value of the traditional reindeer husbandry of the arctic peoples, which is closely connected to the ecology, economy and culture in the circumpolar region. Re-building of family-based reindeer husbandry is of great importance, and needs to be paid more attention.
- Encourages the Arctic Council to provide a framework for an international meeting place to facilitate a dialogue between national authorities and the reindeer industry in the circumpolar North.
- Recognises that the rate of



Photo: Konstantin Kiselev

degradation and loss of reindeer pasture is accelerating in many areas. The International Steering Committee will call attention to the need for securing and maintenance of reindeer pasture. International management of pasture areas, especially where these span national borders, can be an important step towards the achievement of sustainable reindeer husbandry.

- Recognises the need to develop a more comprehensive approach to the management of reindeer husbandry. Furthermore encourages the development of the educational system and enhance the flow of knowledge between herders, scientists and managers.
- Recognises the need to develop or improve already existing legislation that aims to protect and enhance the life and culture of reindeer peoples.
- Recognises the need to increase awareness of the market potential of reindeer products and to stimulate the process of adding value to these products.
- Draws attention to the need for better management plans and scientific programmes to secure the co-existence of reindeer husbandry with predators, wild reindeer and caribou.
- Recognises the importance of existing international co-operation between arctic nations. Bilateral agreements could be extended into new areas of co-operation for land use and resource management.

Next step

The Ministerial meeting in Arctic Council have approved a follow-up project for the next two years.

The working title on the new project is: Reindeer husbandry and Wild Reindeer/Caribou. The main focus will be on external pressure on the industry and we have designed the project into two parts.

1. Through the work of the Sustainable Reindeer Husbandry project, the challenges of fast-growing wild reindeer/Caribou herds are mentioned as one of the factors that have a great impact on reindeer husbandry. The project will focus on the development of wild reindeer and caribou herds and different national population management strategies. Further, the project will focus on how population management projects affect indigenous communities.

2. Reindeer husbandry is traditionally based on the family. The role of the family, or the different members of the family, varies between different reindeer societies in the circumpolar area. But what is happening with the family members and family structure in modern societies, and in period of rapid change, for instance, from increased pressure from wild reindeer/caribou? The focus in this part of the project is on the different strategies used by reindeer families in response to different external pressures. Is there a development towards dissolution of the family or are external pressures strengthening the role of the family?

Evenks slaughtering reindeer, Russia.



■ *Icelandic Geographic*, THORDIS H. YNGVADOTTIR, editor Islandsmyndun Ltd. 2002. 98 pp.

A new species has emerged in the flora of magazines portraying Iceland. This one stands out, though, with its sleek design, layout, and high photo and print quality.

The magazine is not a tourist guide, for it does not suggest specific destinations or tours; it is not a scientific publication, though it presents geology, history, and ecology; and it is not a conservation publication, for it does not take a stand on controversial environmental issues.

Rather than being exclusive to travel, science, or conservation, *Icelandic Geographic* is a good supplement to any collection of more specialized literature on Iceland. Issued only once a year, it can not in any case be expected to present the full and current picture of any given topic. It is rather an eye-opener and introduction to a wide range of Icelandic specialties.

Topics range from the geological phenomenon of draining lakes, the biology of the arctic fox, a portrait of a modern-day Icelandic adventurer, sea ice around Iceland, and a colorful presentation of the island's most characteristic birds. The tone throughout is personal, with authors presenting first hand experiences and impressions.

Though WWF would have liked a stronger conservation angle and engagement, this new magazine leaves one with a feeling of knowing, respecting, and enjoying this special rocky island straddling the mid-Atlantic Ridge – even if one has never been there. And this

certainly is a good basis for becoming engaged in Icelandic nature conservation issues.

STEFAN NORRIS

WWF International Arctic Programme

■ *Towards a New Millennium:*

Ten years of the indigenous

movement in Russia.

THOMAS KØHLER

and KATHRIN WESSENDORF, eds.

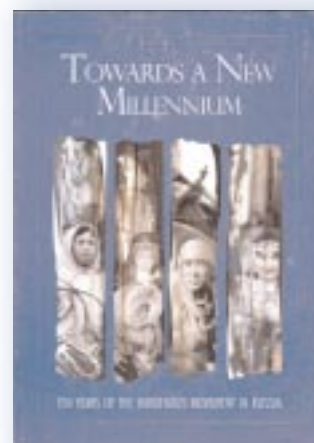
IWGIA and RAIPON, 2002.

Copenhagen, 292 pp.

This book surveys the organisation and movement of the indigenous peoples of Russia after the fall of the Soviet Union in 1989. Through essays by and interviews with the leaders and organisers of some of the more than 30 indigenous organisations in Russia, the book paints a picture of an intense and challenging period of activity within the indigenous peoples' movement. This edition is a translation from the original Russian version printed in 2000.

The essays run the gamut through issues that may be familiar to indigenous peoples worldwide. They are divided into chapters on socio-economic situations, environmental problems, and legal rights. The essayists and interviewees speak about overcoming discrimination, retaining land rights, and attempting to gain a voice within the political system, while organising at the grass roots level.

Towards a New Millennium is a source of useful information about the social, economic and environmental situations among the 300,000 persons of the 'indigenous numerically small peoples' of the Russian federation. However, the



book is also an empowerment tool: many essays are heartfelt reflections on the traditions of the past, the challenges over the past ten years, and hopes for the future of indigenous peoples in Russia.

GLENDIA KOH

WWF International Arctic Programme

■ *Atlas of the Pechora Sea birds:*

distribution, abundance,

dynamics, problems of protection.

YU.V. KRASNOV, YU.I. GORYAEV,

A.A. SHAVYKIN, N.G. NIKOLAEVA,

M.V. GAVRILO, M.V. CHERNOOK.

Apatity, Publication of the Murmansk

Marine Biological Institute –

Kola Science Centre of Russian Academy

of Sciences, 2002, 164 p.

Sea birds are probably the creatures most at risk from oil spills, as the recent Prestige disaster shows. Facing the coming large scale extraction and transportation of oil gas-condensate in the Barents Sea, it is, therefore, absolutely necessary to have a clear understanding of the abundance and distribution pattern of seabirds in the areas of possible future offshore development.

No less important are effective methods to monitor what is happening at sea with regard to seabirds and the factors affecting them, which include pollution from hydrocarbons and other kinds of pollution from terrestrial sources or from ships.

Such methods have been developed by a team studying seabirds in the Pechora Sea, the south-eastern part of the Barents Sea, already a starting point for tanker transportation of oil from the Varandei terminal and where offshore oil extraction is expected in the coming years.

The team includes the scientists from the Murmansk Marine Biological Institute (Yuriy Krasnov, Yuriiy Goryaev, Anatoly Shavykin) Polar Research Institute for Marine Fisheries and Oceanography – PINRO (Vladimir Chernook), Museum of the Arctic and the Antarctic (Maria Gavrilov) and WWF experts (Nataliya Nikolaeva). As a basic platform they used the flying laboratory ANTONOV-26 of PINRO along with ship-based observations. A specially developed statistical technique was used to calculate general abundance of birds in the area. The results are

Forthcoming arctic meetings & events

Title	Where	When	Contact
Conference: Snow change: Northern Indigenous Views on Climate Change and Ecology	Murmansk, Russia	February, 21–26 2003	Tero Mustonen, Project Manager, Teiskontie 33, P.O.Box 21, FIN-33521 Tampere; Tel: +358 03 2647 111; Fax: +358 03 2647 222; E-mail: tero@snowchange.org Web site: Finland http://www.snowchange.org/
Conference: Arctic — Alpine Ecosystems and People in a Changing Environment	Tromsø, Norway	24 February — 1 March 2003	Polar Environmental Centre; E-mail: ingrid.storhaug@npolar.no or kaye.robinson@npolar.no ; Fax: +47 7775 0501; Web site: http://www.npolar.no/ArcticAlpine2003/
Annual Ecotourism Conference of the Alaska Wilderness Recreation and Tourism Association including the Alaska Cultural and Rural Tourism Symposium.	Girdwood, Alaska, USA	March 4–7, 2003	Alaska Wilderness Recreation and Tourism Association www.awrta.org
Conference: Northern Contaminants Program Symposium on Contaminants in the Canadian Arctic	Ottawa, Canada	March 4–7, 2003	Jennifer Baizana, Tel: tel: +1 819 953 8109, fax: +1 819 953 9066; E-mail: baizanaj@inac.gc.ca ; Web site: www.inac.gc.ca/ncp
Conference: Polar Marine Science . The changing polar oceans: impacts of a changing climate on physical, chemical, biological and coupled systems	Ventura, USA	March 16–21, 2003	Conference Chair: Robin D Muench, Earth & Space Research, 1910 Fairview East, Suite 102, Seattle, WA, 98102-3620; Email: RMUENCH@ESR.ORG ; Web site: http://www.grc.org/programs/2003/polar.htm
Conference: Wilton Park Conference, Arctic Co-Operation 12 Years on — how successful?	West Sussex, UK	March 17–21, 2003	alison.jones@wiltonpark.org.uk , Tel: +44 1903 815020, www.wiltonpark.org.uk
Conference: 7th International Symposium on Mining in the Arctic	Iqaluit, Nunavut, Canada	March 28 — April 4, 2003	CIM Meetings Department, 3400 de Maisonneuve Blvd. West, suite 1210 Montreal, Quebec H3Z 3B8, Tel: +1 514 939 2710, ext. 318; Fax: +1 514 939 2714; E-mail: smajor@cim.org ; Web site: http://www.nunanet.com/~cngo/isma.html
Arctic Summit Week	Kiruna, Sweden	March 31 — April 4, 2003	The IASC Secretariat, Middelthunsgate 29, P.O. Box 5156, Majorstua, N-0302 Oslo, Norway; Tel: 47 22 95 99 00; Fax: 47 22 95 99 01; E-mail: assw2003@polar.se Web site: http://www.iasc.no/
Conference: Fisheries In The Bering Sea	Anchorage, Alaska, USA	April 3–6, 2003	Rory Cox, Communications Coordinator, 1440 Broadway, Suite 306, Oakland, CA 94612, USA; Tel: 1 510 251 8800 ext. 302; Fax: 1 510 251 8838
Meeting: International Ice Charting Working Group Fourth Meeting (IICWG-IV)	St.Petersburg, Russia	April 7–11, 2003	Arctic and Antarctic Research Institute, 38 Bering Street, St. Petersburg, Russia, 199397; Tel: +7 812 3521520; Fax: +7 812 3522688; E-mail: iicwg@aari.nw.ru
Conference: Dynamics Of Socio-Economic Processes In Northern Regions	Apatity, Russia	April 9–12, 2003	The Institute of Economic Problems; E-mail: selin@iep.kolasc.net.ru or ivanova@iep.kolasc.net.ru
Conference: Assessment And Remediation Of Contaminated Sites In Arctic And Cold Climates (ARCSACC)	Edmonton, Alberta, Canada	May 4–6, 2003	ARCSACC Conference — Edmonton'03, University of Alberta, Department of Civil and Environmental Engineering, Rm. 303 CEB, Edmonton, Alberta, T6G 2G7, Canada; Tel: +1 780 492 2176; Fax: +1 780 492 8198; E-mail: kwbiggar@civil.ualberta.ca or michael.nahir@pwgsc.gc.ca ; Web site: http://www.civil.ualberta.ca/arcsacc/information.htm

Meeting and event information on the Web

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

summarized in a recently published book, *Atlas of the Pechora Sea birds: distribution, abundance, dynamics, problems of protection*.

Besides the Russian text, it contains 90 maps with explanation in English. All tables showing algorithms of general abundance assessment are also supplied with English titles and captions.

This scope of the book does not restrict itself to ornithological or bio-oceanological issues. Chapter five explores the ways for effective monitoring and the strategy of protection of marine life in the Pechora Sea from oil pollution. This makes this publication timely and operational showing also a good example of cooperation

between various types of organisations in Russia in environmental issues.

The book is available by ordering from the Murmansk Marine Biological Institute: mmbi@mmbi.info

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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.

