



Arctic Bulletin



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Making the Connection: Environmental Protection and the Arctic Council



The AEPS and the Arctic Council

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Sustainable Development

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EDITORIAL

Erosion

The natural process of coastal erosion reveals what nature has built up over thousands of years. The picture below shows the pristine coastline of the New Siberian Islands in northern Yakutia/Siberia, where the landscape's stark beauty and a wealth of prehistoric remains combine to produce one of the world's natural history treasures. The president of the Sakha Republic (Yakutia), Mikhail Nikolaev, has made this treasure a part of his "Gift to the Earth" within WWF's Living Planet Campaign by designating it as a protected area (see pp. 12-14).

Russia continues to implement the Circumpolar Protected Area Network Plan (CPAN) at an impressively fast pace. CPAN is a joint project of the eight Arctic countries within the Conservation of Arctic Flora and Fauna (CAFF) programme, which is a part of the Arctic Environmental Protection Strategy (AEPS) (see pp. 5-7). Simultaneously, however, enormous question marks remain as to how to solve the massive environmental (and other) problems of the country. The factories of Norilsk Nickel are probably the single largest

source of air pollution in the whole Arctic (see pp. 20/21). The more the eight Arctic countries strengthen their common commitment to protecting the Arctic environment, the greater the chance that such immense challenges will be addressed, and that progress on other fronts will continue.

The further development of the Arctic countries' environmental process has the potential to be a model for the world. As Norwegian Ambassador Oddmund Graham says in his interview (see pp. 10-11), "the Arctic is of such great ecological importance that if we cannot make sustainable development work there, where in the world will we be able to do it?"

Nonetheless, clouds on the horizon obscure the future of the environmental strategy of the eight Arctic nations. If the Arctic Eight do not quickly address the many concerns about the continued vitality of the AEPS within the new framework of the Arctic Council (see pp. 4-7), there is a

danger that circumpolar commitment to environmental protection will erode. Ironically, this uncertainty comes at a time when the work of the AEPS has produced valuable reports and strategies that document what needs to be done now. These include the anticipated report on the state of the Arctic environment, which is the outcome of six years' work by the Arctic Environmental Assessment and Monitoring Programme (AMAP), and CAFF's CPAN. These and other efforts only make sense if the Arctic countries take the next step and implement the recommendations of the AEPS working groups.

There is also some uncertainty about WWF's participation in the AEPS. Over the years WWF-International's Arctic Programme has established what may be the most extensive and complete circumpolar presence of all of the non-governmental conservation organisations. Through field and policy work, the Arctic Programme has undertaken conservation activities all over the Arctic and achieved constructive partnerships with governments and the people in the region

(see AB 1994-1997). Governments and indigenous peoples organisations tell us that our *Arctic Bulletin* is a leading source of information on the AEPS and Arctic Council, and that our work helps to promote Arctic environmental interests worldwide. Nonetheless WWF is the only organisation that attends AEPS and Arctic Council meetings on an *ad hoc* basis rather than as a fully accredited observer. While WWF may not always see eye to eye with all of the Arctic governments on all of the issues affecting the Arctic, both the environment and the process as a whole suffer if the basis for our participation continues to be so uncertain.

We look forward to confirmation that commitment to the Arctic environment is not eroding, and that our mutual interest in the environment makes it possible for all Arctic states to accept the partnership we offer.

PETER PROKOSCH



The pristine and eroded coastline of the New Siberian Islands in the Sakha Republic, Siberia

Photo: M. Gagnepain

Arctic Council/AEPS News

The Future of the AEPS Is Clouded by Uncertainty

Only Norway Is Willing to Make a Statement

This at least was the result of the WWF *Arctic Bulletin's* attempt to obtain a short written statement by each of the Senior Arctic Affairs Officials (SAAOs) on the future of the Arctic Environmental Protection Strategy (AEPS). Since the establishment of the Arctic Council last year, it has been increasingly unclear whether the Rovaniemi Process will come to a formal end with the upcoming Arctic Environmental Ministers' meeting in June, or whether it will continue to exist as an important strategy within the new framework of the Arctic Council. When the AEPS was launched in 1991 in Rovaniemi on Finland's initiative, it made the Arctic the largest region in the world where intergovernmental cooperation was based primarily on environmental protection. Some leading experts have expressed uncertainty about whether the future development of the Arctic Council will strengthen and broaden the AEPS, or whether a much different agenda will

weaken the potential for progress on environmental protection (see pp. 5–7 of this issue and AB 4/96). In order to obtain a clearer picture of the future, WWF sent the following question to all of the SAAOs: *After the upcoming AEPS ministerial meeting in Tromsø, what will the role of the AEPS be? What role will it play in relation to the Arctic Council?*

The Norwegian SAAO, Polar Ambassador Jon Bech of the Royal Ministry of Foreign Affairs, was the only one who was able to give us an answer at this time:

After the Ministerial Meeting in June 1997 the AEPS process will be integrated into the Arctic Council under Canadian chairmanship. The structure of the Arctic Council and the integration of the environmental issues have not yet been on the agenda for the eight Arctic states, but most of the activities of the AEPS will continue. Therefore, what is important is to make sure that the underlying principles and the contributions of

the AEPS programmes form the platform for the future work under the Arctic Council and that the activities that have been initiated under the AEPS are continued and expanded. We must secure a proper balance between economic development and environmental protection in the Arctic.

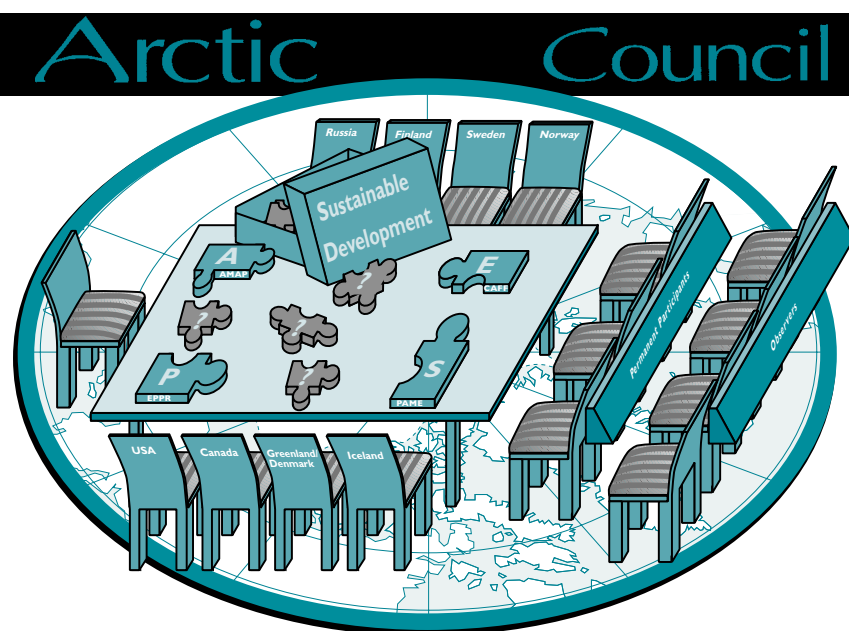
We have reason to be proud of what the AEPS has accomplished.

During Norway's chairmanship of the AEPS our primary objective has been to make sure that the activities of the AEPS are carried forward by the Arctic Council. The AEPS evaluation report to be presented at the Ministerial Meeting in June was initiated to streamline the organisation with a view to the integration ahead. We should actively use the knowledge and experience of the AEPS to make the Arctic Council as effective and forceful as possible.

Canada, Finland and Iceland wrote to say that they were unable to answer our question at this time. In explanation, they stated that "representatives of the Arctic States are still working out the Arctic Council process", that "the discussion about the future role of the AEPS is in an ongoing stage", and that a response would not be appropriate "in view of the fact that this is very much an evolving subject currently being dealt with by representatives of the Arctic Governments who are engaged in formulating a common stand." From other countries we heard similar statements via telephone or nothing at all.

WWF respects the fact that these SAAOs would like to be sure that there is agreement among the Arctic countries before they make public statements on this issue. The response we received, however, reinforces our impression that differences between the Arctic states cloud the future of Arctic environmental protection. There is an urgent need to clarify the way in which the AEPS will be integrated into the work of the Arctic Council. It would be a tragedy if the promising spirit of the Rovaniemi Process and its achievements were to be lost just when new information, such as the forthcoming State of the Arctic Environment report, shows ever more clearly the need to implement a comprehensive Arctic environmental strategy. The Arctic should not be like every other region on earth, where other interests always outweigh environmental protection. It should remain unique.

PETER PROKOSCH



Arctic Council/AEPS News

The Arctic Environmental Protection Strategy (AEPS) and the Arctic Council:

What Lies Ahead?

As a distant observer of the evolution of the AEPS and the troubled genesis of the fledgling Arctic Council, I am responding to the invitation to readers in the last issue of the *WWF Arctic Bulletin* to comment on the Arctic Council. That issue contained several expert views on the Council's significance for the Arctic environment, as well as reflecting the Inuit Circumpolar Conference's disappointment with the Council's features and initial agenda.

The immediate task of the Arctic countries is to draft and agree upon the Council's rules of procedure. They must then formulate the Council's agenda, which must operationalize the problematic notion of sustainable development and utilisation. Some actors will continue to be frustrated by the glacial pace at which this "peri-natal" activity of the Council progresses, while others may be alarmed at the speed with which some important ground shifts in the transition period from the AEPS to the Arctic Council. More ardent proponents of the Arctic Council may dismiss the AEPS by faint praise. Sceptics, by contrast, will delight in the term "soup council" to describe the new forum and expect its evolution, like its genesis, to be at best a distraction of scarce resources from more important matters or, at worst, a troubling complication for Arctic environmental cooperation. The picture will remain murky for some time. One may take comfort in the belief that in order to understand, perhaps one has first to be confused!

It is still far from clear what the Arctic Council will actually do and what, in practical terms, its relationship to and impact upon the ongoing work of the AEPS will

be. The fate of the AEPS Task Force on Sustainable Development and Utilisation (TFSDU), for example, was one of the issues in the endgame of negotiations to create the Arctic Council. TFSDU was a lively body, partly because its work on barriers to trade in living resources made the U.S. uncomfortable. It was also affected by differences inside the Canadian bureaucracy over sustainable development and was distinguished by the presence of Senior Arctic Officials in several of the national delegations. Some initially feared that TFSDU would become the most influential of the Working Groups and erode the AEPS's emphasis on classic environmental protection. Ironically, TFSDU's upgrading to a Working Group (the Working Group on Sustainable Development and Utilisation, or WGS DU) at the Inuvik Ministerial Meeting in March 1996 when Norway took over the AEPS Chairmanship was in some ways a victory for environmentalism in the struggle over the Council's structure and agenda and the rivalry for overall leadership of Arctic cooperation. A crude interpretation would be that TFSDU/WGS DU had now come to be identified with the survival of the fairly "pure" environmental agenda for the Arctic, one that had so far avoided too many political minefields. WGS DU's terms of reference were supposed to be refined pending creation of the Council and development of the latter's Sustainable Development Programme (SDP). With agreement on the Arctic Council Declaration, interest in the WGS DU itself waned, as attention shifted to the shape of the SDP.

At their Oslo meeting in November, the Senior Arctic Affairs Officials (SAAOs) spent

much time on the terms of reference for the Arctic Council's SDP, as well as the Council's rules of procedure. The basis for their discussions was the WGS DU Chairman's reflections on sustainable development work, U.S. and Canadian draft terms of reference, and a U.S. draft rules of procedure with Canadian and Russian responses. Elaboration of an actual workplan for the SDP and concrete activities under it can only begin once SDP's terms of reference have been agreed upon by the SAAOs prior to formal adoption by the Ministers. It was hoped that this might be achieved by the time of the last AEPS Ministerial Meeting in June 1997, at which the AEPS should be "subsumed" under the Council. There was much sense in the argument of indigenous peoples' organisations that one can only define sustainable development through agreeing upon and implementing a concrete work programme, and that a work agenda should be prepared in time for the June Ministerial. Nonetheless, the Arctic Council's first Ministerial in September 1998 seems a more realistic and perhaps more desirable target date. The outcome of the November Oslo meeting merely reinforced the impression that protracted debate over the SDP's terms of reference and the Council's rules of procedure reflected persistent deeper tensions over the agenda and structure of Arctic cooperation, differences that had been papered over in order to meet a political timetable for the Arctic Council's "delivery".

Yet these debates cannot be satisfactorily resolved in isolation. In addition to their agenda-shaping function, they are also related to issues of finance, participation, and organisational process

Arctic Council/AEPS News

► in the Council. Attitudes still differ quite markedly, for example, on the need for a common secretariat; the degree of common-cost funding necessary to underpin cooperation; the criteria for such burden-sharing; the ability of senior officials to coordinate different programme areas; and the relative status of Permanent Participants and other governmental, intergovernmental and

nongovernmental Observers. As Chair of the AEPS, Norway, together with the AEPS Secretariat, has already set in train what seems to be a thorough examination of precisely these kinds of issues as well as of the AEPS Procedural Guide, with a view to improving the effectiveness of the AEPS. Ideally, this self-assessment of the AEPS will contribute to the wise institutional design of the Arctic

Council. One can only hope that these two processes – formative for the Council and adaptive for the AEPS – will “bring out the best” in each other and thus help to ensure that the sustainable development agenda and process builds effectively on the many fruits of the AEPS and, perhaps, enriches them.

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A Sustainable Development Strategy for the Arctic Council

The Declaration on the Establishment of the Arctic Council, signed in Ottawa on September 19, 1996, highlights the pursuit of sustainable development in the Arctic. The resultant contrast between this declaration and the 1991 Rovaniemi Declaration, which launched the Arctic Environmental Protection Strategy, is striking. At Rovaniemi, the Arctic Eight directed attention to “threats to the Arctic environment and the impact of pollution on fragile Arctic ecosystems.” They called for international cooperation to protect the Arctic environment. In the Ottawa Declaration, the goal of sustainable development receives equal billing with environmental protection. The purpose of the Arctic Council is

thus to “provide a means for promoting cooperation, coordination and interaction [on] issues of sustainable development and environmental protection in the Arctic.”

What is the significance of this development? What is the proper relationship between sustainable development and environmental protection as goals for the efforts of the Arctic Council? What specific initiatives can the Arctic Council take that will make a difference in the pursuit of sustainable development under the conditions prevailing in the Arctic? Given the elusiveness of the concept of sustainable development, it will come as no surprise that neither the Ottawa Declaration itself nor the drafting

process that produced this declaration offers answers to these questions. An item called “Terms of Reference for Sustainable Development Activities Under the Arctic Council” became a principal order of business at the first meeting of the Senior Arctic Officials (SAOs) following the signing of the declaration. Numerous interested parties submitted discussion papers addressing the topic. Yet no consensus emerged concerning the role of the Council in the pursuit of sustainable development in the Arctic.

What are we to make of this situation? Is sustainable development a political cul de sac that will stymie efforts to move the Arctic Council from paper to practice? In this brief essay, I seek to map a strategy for the Council that will avoid this trap. I start by proposing a clarification regarding the relationship between sustainable development and environmental protection as goals for the Arctic Council. I then spell out three substantive initiatives that should form the core of a sustainable development program for the Arctic.

If sustainable development is to be meaningful in this context, it must be understood as the under-



Arctic Council/AEPS news

lying concern in terms of which *all* other activities are evaluated. Sustainable development in the Arctic means economic and social development for northern communities that does not deplete or degrade the ecosystems within which these communities operate. Environmental protection is essential, but it is not the only component of an integrated program designed to promote sustainable development. Efforts to protect “fragile Arctic ecosystems” that are not accompanied by effective initiatives designed to meet the economic and social needs of the region’s permanent residents are doomed to failure. It follows that the idea of treating sustainable development and environmental protection as the “twin pillars” of the Arctic Council rests upon a misconception. So also does the call to devise a “sustainable development program” that is somehow distinct from the environmental protection program.

That said, what concrete steps can the Council take to promote sustainable development in the Arctic? First, the Council should play a role in designing and implementing management regimes that will maximise the sustainability of consumptive uses of renewable resources in the Arctic. Sometimes this is a matter of reinforcing community-based institutions that have proven effective in regulating the harvest of renewable resources for local consumption over long periods of time. In such cases, the Council may help by transmitting knowledge of successful arrangements from one part of the region to another. In other cases, the fish, birds, and animals in question migrate across jurisdictional boundaries, raising international management concerns in the process. Beyond this, sustainable practices featuring the consumptive use of renewable resources sometimes involve the marketing of products (e.g. seal skins) outside the Arctic. The Council should take the initiative in developing international regimes for the management of highly migratory species and in protecting markets for products

derived from renewable resources in cases where harvesting practices are demonstrably sustainable.

Second, the Council should address issues relating to large-scale industrial activities (e.g. oil and gas development, hydroelectric power development, the extraction of nonfuel minerals) in the Arctic. Again, this is partly a matter of disseminating information about successful practices to those located in other parts of the region. The innovations associated with the Kuparuk Industrial Complex on Alaska’s North Slope, for example, offer models that surely are relevant elsewhere. But the environmental and social impacts of industrial development also include transboundary impacts of projects located within the jurisdiction of a single state (e.g. disturbances of habitat critical to migratory animals) and the effects of transportation systems (e.g. pipelines, power lines, ice-reinforced tankers) created to move Arctic resources to distant markets. In such cases, there is a role for the Council in devising appropriate standards and establishing impact assessment procedures to ensure that the transboundary effects of industrial activities are recognised. The effort already underway to develop “Guidelines for Environmental Impact Assessment (EIA) in the Arctic” is a commendable step in this direction. The Council should follow through on this project and initiate additional steps of a similar nature.

Third, the Council should become an advocate for the Arctic in efforts to curb the impact of outside forces on northern ecosystems and human communities. The high northern latitudes constitute a sink for anthropogenic pollutants (e.g. organochlorines, heavy metals, radioactive fallout), and they are particularly susceptible to large-scale processes like ozone depletion and climate

Arctic Council

change. Yet those whose actions produce these effects have little interest in what goes on in the Arctic. Often, they are not even aware that their actions affect Arctic systems. As a result, feedback mechanisms regulating human/environment interactions in this region are weak. The Council could become an Arctic advocate in a variety of non-Arctic forums, including current discussions aimed at developing a protocol to the Long-Range Transboundary Air Pollution Convention on persistent organic pollutants (POPs) and a protocol to the Climate Change Convention intended to strengthen the commitment of the industrialised countries to controlling emissions of greenhouse gases. In effect, the Council would become the voice of the Arctic in broader deliberations dealing with matters of intense concern to Arctic residents.

Sustainable development is an elusive concept, and the Ottawa Declaration offers little guidance in spelling out a role for the newly-created Arctic Council in this realm. The Council must therefore proceed by trial-and-error, seeking to foster social learning regarding the requirements of sustainable development in the Arctic. Taken together, however, the effort to 1) design sustainable harvesting practices for renewable resources, 2) regulate the environmental and social impacts of industrialisation, and 3) provide a voice for the Arctic in outside forums should offer ample scope for the development of a vibrant sustainable development program.

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Arctic Council/AEPS News

Financing the Arctic Environmental Protection Strategy (AEPS) and Its Working Groups:

Time for a Change

Now that the Arctic Council is poised to take over the implementation of the AEPS, the time is right for a new approach to the funding of Arctic cooperation. Since 1991, the eight Arctic countries have paid for the AEPS through a system of voluntary contribution. That system is not working. A few countries have paid the lion's share of the costs; some payments have come late or not at all; long-range planning has been difficult because funding has been so uncertain; and a chronic shortage of funds has prevented the implementation of crucial environmental projects.

At the initial AEPS Ministerial Meeting in Rovaniemi, Finland, the Arctic countries agreed that "(e)ach country will make its best efforts to provide resources adequate to carry out its responsibilities (for the AEPS)." In practice, this has meant that each country has decided how much it will pay and even whether it will pay at all.

In theory, the form of voluntary contribution that applies to the administrative costs of the AEPS itself should have produced relatively equitable results. Funding for the AEPS Secretariat, which coordinates AEPS meetings and produces analyses, reports and minutes, operates under the host country principle. The position of host country rotates to a different Arctic country every one and a half to two years. A host country pays the entire cost of the AEPS Secretariat during its tenure.

The result of this system, however, has been unfair. Only four of the Arctic countries – Finland, Greenland, Canada and Norway – have acted as host countries. These countries, three of which are among the smallest of the Arctic Eight, have thus ended up paying for all of the administrative costs of the AEPS. And the cost

of being the AEPS host country can be quite high.

Two of the AEPS Working Groups, the Arctic Monitoring and Assessment Programme (AMAP)

from 1992 to 1996. Since mid-1996, Iceland has been the host country for CAFF. In 1995 the Senior Arctic Affairs Officials (SAAOs) approved a decision to share the cost of the

CAFF Secretariat among the Arctic countries.

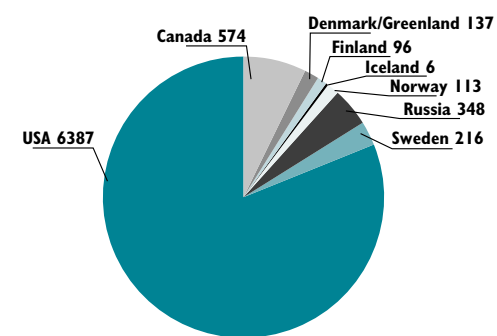
In addition to the cost of the Working Group Secretariats, the Arctic countries also contribute varying amounts to AMAP and CAFF projects. Some of these projects begin life as an Arctic country's internal scientific project and later become CAFF projects or vice versa. Because of this intermingling of CAFF and national projects, it is difficult to obtain precise figures for each country's contribution to CAFF projects.

The figures that are available for AMAP and CAFF illustrate the unfairness of the voluntary contribution system. They show that

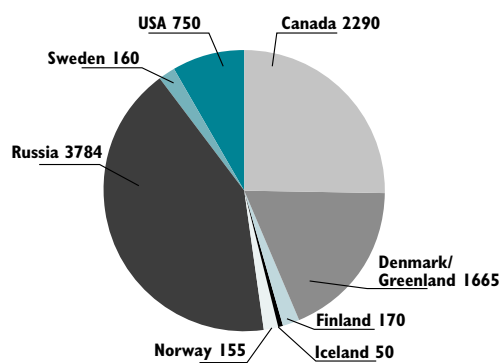
Norway, Iceland and Canada have contributed the bulk of funding for these two Working Groups. As the graphs below reflect, during the period 1992 to 1996 Norway contributed \$1,976,904.76 USD to AMAP. This was nearly three times as much as the next highest contributor, the Nordic Council of Ministers, whose contribution came also in part from Norway. USA and Canada, the two

GNP and Amount of Arctic Territory for the Eight Arctic Countries

GNP in billions of US\$



"Arctic area" Km²



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largest countries in the AEPS and the two countries with the highest per capita GNPs, contributed respectively just less than one-fifth and just more than one-fourth of Norway's contribution. Sweden and Denmark/Greenland, both of which paid part of the Nordic Council of Ministers' contribution, donated an additional \$77,775.40 USD (Sweden) and \$103,174.60 USD (Denmark).

USD for administrative and project-related costs. Norway, while contributing comparatively less to administration (\$32,600 USD), has given \$150,000 to various CAFF projects. While figures for the USA's contribution to CAFF project costs were not available, its contribution to CAFF's administration from 1995 to 1997 was \$72,500.

The funding of the Indigenous Peoples' Secretariat

(IPS) provides a final example of the problems of both voluntary contribution and the host country principle. IPS, while not a Working Group, helps to coordinate and fund the participation of indigenous peoples in the AEPS. This function benefits all of the Arctic countries by ensuring comprehensive participation in Arctic cooperation. IPS' host countries are Denmark and the Greenland Home Rule Government; collectively, they have paid the IPS' entire administrative cost of \$622,500.

With respect to the remaining Working Groups, there is little detailed information available about their costs and sources of funding. It is probably safe to assume, however, that funding for these groups is also inequitably distributed, with the majority of the administrative costs falling on the country that is home to the working group's chair.

A perhaps more serious result of the current system of funding is that there is not enough money to undertake essential work on the Arctic environment. For example, in June

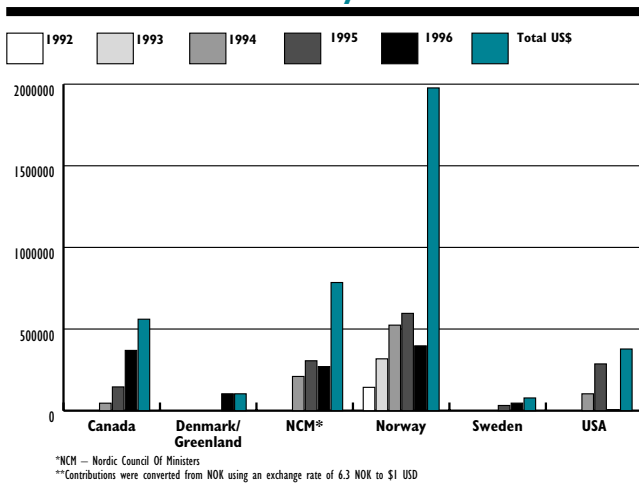
AMAP will produce a comprehensive monitoring report on the state of the Arctic environment. Undoubtedly the report will highlight the need for remediation of POPs (persistent organic pollutants) and other contaminants – remediation that is necessary both to preserve human health and the Arctic environment. But there is nothing in the budgets of the AEPS or its working groups that would permit any kind of large-scale remediation project. Similarly, an Arctic conservation plan is necessary if the Arctic countries are to work systematically to preserve key Arctic ecosystems, identify and protect threatened species that migrate over national borders, and determine what types of development in the Arctic really are sustainable. Again, however, under the current funding system it is unlikely that CAFF could obtain funds to develop this plan.

Recognising these problems, the Ministers at the Third AEPS Ministerial Conference asked the AEPS Secretariat to analyse the current AEPS funding mechanism and to present proposals for improving it. At the last meeting of the SAAOS in Oslo, the AEPS Secretariat produced two analytical papers on these topics: "Major Mechanisms and External Institutions to Finance AEPS Projects" and "Strategy for Financing of Arctic Environmental Cooperation". These papers provided the basis for this article.

The AEPS Secretariat's analysis concludes that a new, binding and systematic funding mechanism is needed. The analysis suggests various methods of calculating each country's contribution, including linking contributions to GDP, per capita GDP, population, the percentage of that country's territory that lies in the Arctic, or a combination of all of these factors. Whatever method the Arctic Council ultimately chooses is less important than ensuring that funding levels are systematically assessed, binding – and higher.

SAMANTHA J. SMITH

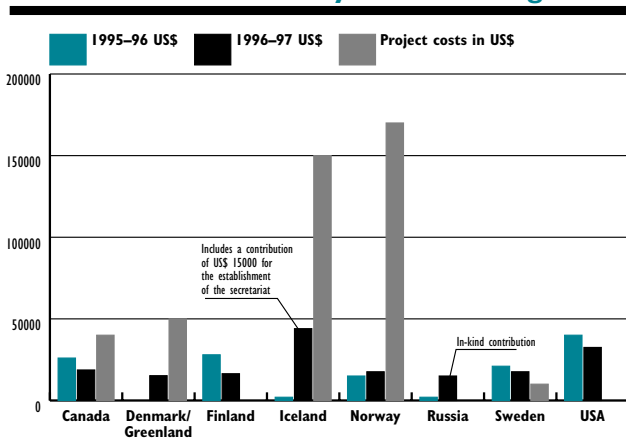
Contributions to AMAP by Arctic Countries **



From 1994 to 1996, Canada was the highest contributor to CAFF, giving a total of \$260,000 USD for the administration of the CAFF Secretariat and for various CAFF projects. \$180,000 of this amount was paid during 1994 and the first quarter of 1995, when Canada was the CAFF Secretariat's host country. After Canada, Iceland has contributed the largest amount to CAFF, paying \$196,000

USD for administrative and project-related costs. Norway, while contributing comparatively less to administration (\$32,600 USD), has given \$150,000 to various CAFF projects. While figures for the USA's contribution to CAFF project costs were not available, its contribution to CAFF's administration from 1995 to 1997 was \$72,500.

Contributions to CAFF by the Arctic Eight



For example, in June

Interview with Ambassador Oddmund Graham:

Defining Sustainable Development and Utilisation

Since the launch of the Arctic Council last year, there has been an ongoing debate over the way in which the new Council will define **sustainable development** and how the Council's work in that area will be structured. At the last meeting of the Senior Arctic Affairs Officials in Oslo, **Oddmund Graham**, the Norwegian Ambassador for the Environment and the chair of the Working Group on Sustainable Development and Utilisation of the Arctic Environmental Protection Strategy (AEPS), presented a thought-provoking and well-received report on sustainable development and its future in the Arctic. The WWF Arctic Bulletin took the opportunity to ask Ambassador Graham some more questions on this important issue:

Arctic Bulletin: At the November, 1996 meeting of the Senior Arctic Affairs Officials, you presented a very well-received report on sustainable development in the Arctic. Can you summarise the report's message?

Ambassador Graham: There has been quite a bit of debate about what the term sustainable development means, and my report presented the various dimensions of that concept. The basic question is whether sustainable development is only economic development; whether it's only protecting the environment; whether it's only addressing the concerns of the local people; or whether one should put the interests of business first. It's important that we resolve this issue, because sustainable development should be the overriding objective for circumpolar cooperation or for any international cooperation these days. It is quite clear that we have to modify lifestyles and behaviors in the industrial world and try to find new ways of living that correspond to a more sustainable way of managing this planet.

The first message of the report is that sustainable development is for people and is people-

oriented. That is consistent with the declaration of principles agreed upon at the 1992 United Nations conference on Environment and Development in Rio de Janeiro; these are the principles that guide the implementation of Agenda 21. But we should remember that man is part of and not above the ecological system.

The second message is that environment must provide the premises for sustainable development. One cannot have economic growth without taking into account environmental and social concerns, the concerns of the people that live in the area, and the concerns of future generations. We must integrate these various dimension in practice. That is quite demanding and should indeed be the overriding responsibility of the Arctic Council itself.

The third message is that the Arctic is of such great ecological importance that if we cannot make sustainable development work there, where in the world will we be able to do it? We really have to see the Arctic as a test case for sustain-

“... the Arctic is of such great ecological importance that if we cannot make sustainable development work there, where in the world will we be able to do it?”

able development. One advantage is that the eight Arctic countries together should have the resources needed to do the job, both human, financial, technological and scientific. It would be quite disappoint-

ing for future generations if we could not make this very sensitive area a sustainable one.

A fourth message is that we are at a crossroads in history. We have passed from the Cold War to an era of cooperation that has just begun. That is why it's so important to start on the right track and in the right direction. If we change only one millimetre now in the right direction, that may lead to big changes in one hundred years' time. The actors that will decide the direction of Arctic cooperation are not just governments, but also other stakeholders such as the local people, business and voluntary organisations such as WWF.

Arctic Bulletin: The Sustainable Development Task Force of the AEPS was given the task of identifying goals and principles of sustainable development in an Arctic environmental context, and opportunities and mechanisms for the application of these principles. Has there been any progress towards that goal?

Ambassador Graham: As you will see from my report, AMAP, CAFF and PAME and other groups working on environmental issues under the AEPS already are implementing key environmental principles such as the polluter pays principle and also the precautionary principle. There is also increasing use of the life cycle approach. Those principles and that approach are basic to activities that fall within the scope of sustainable development, and are complemented by the use of traditional knowledge.

In addition, in the Arctic there is a critical and delicate balance between use and protec-



Ambassador Oddmund Graham

tion of the resources. In order to be sustainable both dimensions should be included.

Arctic Bulletin: But don't you agree that the goals and principles of sustainable development have to be described clearly before it can become what you have called the horizontal issue of the Arctic Council's future work?

Ambassador Graham: Yes, I agree that we have to agree on what we mean by sustainable development and on common objectives and that we need indicators to measure progress. In order to start taking concrete steps toward sustainable development, however, we don't really need a clearer definition of sustainable development than the one we have. The Brundtland Commission gave us the necessary definition of sustainability, and the AEPS strategy gives us the necessary objectives for sustainable development in the Arctic. Those objectives are equally relevant to the work of the Arctic Council, and we don't need to change them much to have new terms of reference for the Arctic Council. The challenge now is to operationalise sustainable development. We have already made some progress under the AEPS, for example the work towards common guidelines for environmental impact assessment, and common environmental guidelines for petroleum activities.

The environmental dimension should be coupled with other

key areas, such as health, education, culture, and economic activities. These could all be areas where we could give a practical meaning to the sustainable development, and Arctic cooperation on these issues should encompass cooperation and new forms of partnerships between central, regional and municipal authorities, business interests, and the organisations and people that are living and working in the area.

Arctic Bulletin: Can you give us some small-scale examples of sustainable development in practice?

Ambassador Graham: It's only when you try to implement the objectives of sustainable development that you see both how difficult it is and how easy it is. Cooperative efforts already provide some examples of sustainable development. The Nordic countries together with Russia, for instance, have been working for years to develop environmental guidelines for the economic activities in the area, as well as various programs and projects to protect the environment in the Barents region. Another example is the fisheries in the Barents region, where we have international agreements based on scientific knowledge and agreed use of resources. If agreements are respected and implemented, that should be another example of sustainability. Another example, and one that should receive more attention, is the use and promotion of tradi-

tional knowledge of local people. In addition, on Svalbard economic, environmental, social and local concerns are put together in a special strategy, which has been adopted by the Norwegian Parliament through a white paper from the Government.

Arctic Bulletin: In the year 2000, where will the Arctic Council and Arctic circumpolar cooperation stand regarding sustainable development?

Ambassador Graham: I personally hope that the Arctic Council should then meet once a year and receive reports and new ideas for future cooperation on a rich menu of issues and on that basis set future priorities. These issues should include environmental cooperation on the basis of the work that is now well under way under the AEPS. Indeed the work and strategies of the AEPS should be the underlying premise for all activities undertaken by the Sustainable Development Program for the Arctic Council. Furthermore other areas of

“... the work and strategies of the AEPS should be the underlying premise for all activities undertaken by the Sustainable Development Program for the Arctic Council.”

sustainable development should be covered, such as circumpolar programs of cooperation on education, communication, social affairs, health and culture and of course the sustainable use of natural resources. Five years after the establishment of the Arctic Council, I hope that the Arctic Council will really mobilise many kinds of cooperation and will building on a bottom-up and people-based approach. But such a manifold cooperation cannot only be ideas, declarations and objectives. It must be supported by action, adequate financial resources, and political leadership, and of course a shared will to cooperate. It would be a pity if we miss the historic chance for a new alliance for the Arctic and the peoples living there.

Nature Reserve Development in Russia

The expansion of the Lena Delta Reserve and the creation of the Gydan and Kanin Peninsula Reserves mark a very significant step forward for the plans of the Russian Federation to develop its national Arctic reserve system within the framework of the Circumpolar Protected Area Network Plan (CPAN). CPAN is a project, led by Russia, of the eight Arctic countries' Conservation of Arctic Flora and Fauna (CAFF) programme. At present CPAN is progressing the fastest in the Russian Arctic: in the last five years the amount of protected Russian Arctic territory has more than doubled, to about 350,000 square kilometres.



Part of Sakha's "Gift to the Earth":

Lena Delta Reserve Extended to 61,320 Km²

On August 12, 1996, the Russian Republic of Sakha (Yakutia) significantly expanded the Lena Delta state nature reserve. At 14,330 square kilometres, the Lena Delta reserve was already one of the largest and most important nature reserves in the Arctic. With its new size of 61,320 square kilometres, the expanded Lena Delta Reserve is now the largest protected area in Russia and one of the largest on earth.

It is, however, only a small part of Sakha's "Gift to the Earth". Sakha, a republic approximately

the size of Western Europe, decided in 1994 to designate at least 20% of its territory as a nature reserve (see AB 2/95). At the launch of the "WWF 2000 - The Living Planet Campaign" in September last year, whose aim is to protect representative areas of the most important 200 ecozones on the globe by the year 2000, Sakha's president Mikhail E. Nikolayev went one step further. He announced that Sakha would "undertake as a Gift to the Earth the complete protection of 700,000 square kilometres by the year 2000." On February 9, President

The New Siberian Islands are now part of the extended Lena Delta Reserve. They consist in part of an ice core covered by a thin layer of soil.



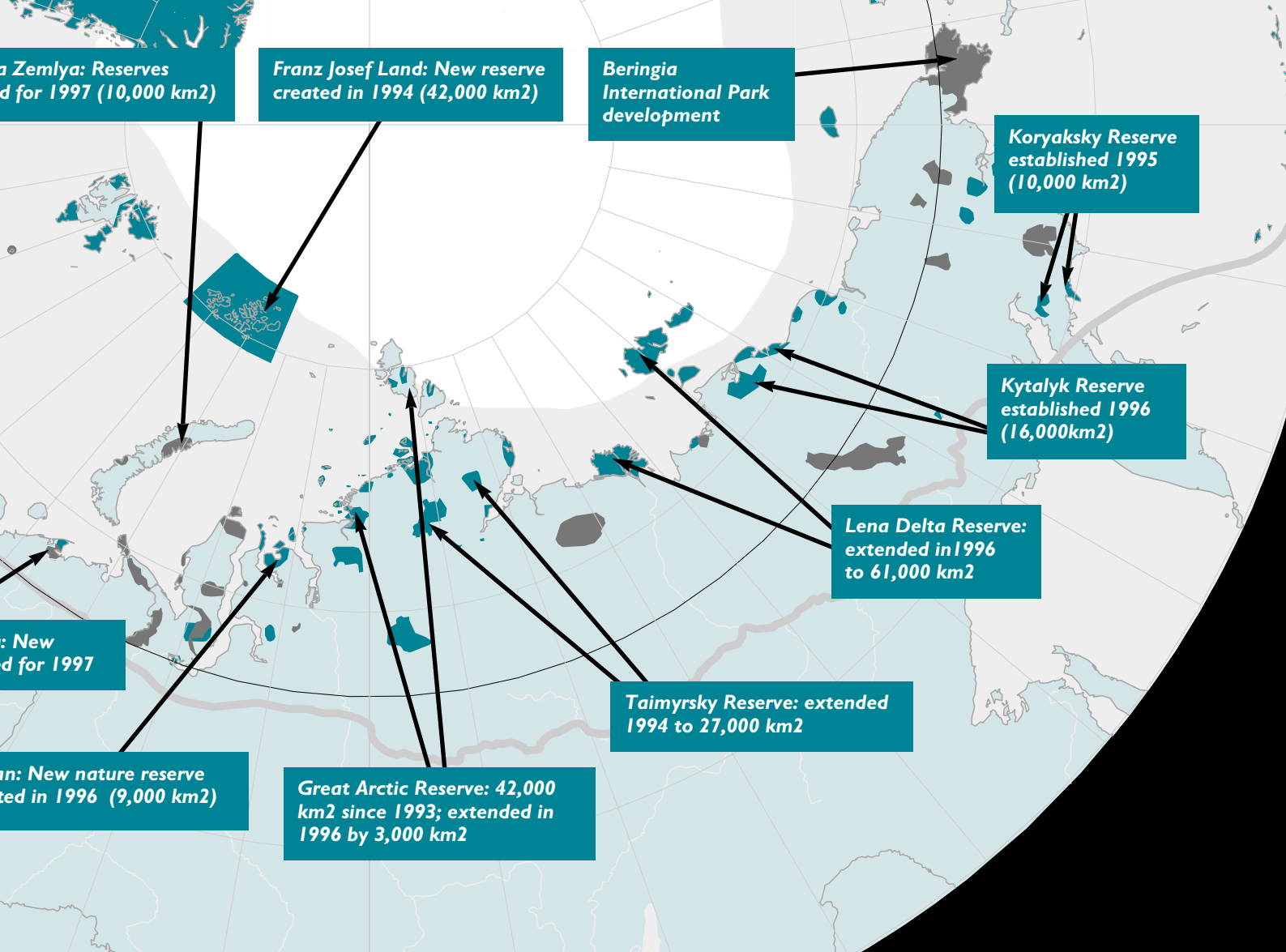


Photo: M. Grigoriev



The New Siberian Islands are an enormous graveyard for mammoths.

Photo: M. Grigoriev

Nikolayev and WWF-International signed a joint cooperation agreement at WWF-International's headquarters. One day later, at a joint press conference with WWF officials in Geneva, President Nikolaev announced Sakha's "Gift to the Earth" to the press.

The collaboration between WWF and Sakha began in 1992, with the first joint biological expedition

to the Lena Delta. At that time Vassili Alekseev, then the chairman of the environmental committee of Sakha's parliament and now Sakha's environmental minister, told WWF that Sakha wanted to secure for future generations both its valuable mineral deposits and its pristine habitats. One year later, both he and president Nikolaev visited WWF-Sweden in



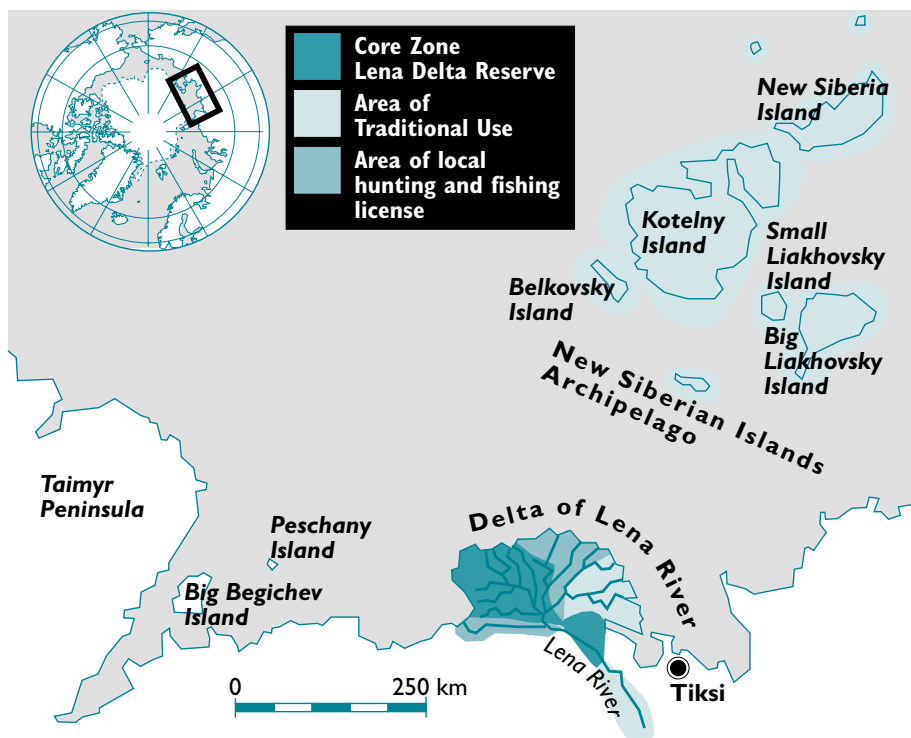
Nature Reserve Development in Russia



The president of the Sakha Republic, Mikhail Nikolayev, made an impressive "Gift to the Earth".

➤ Stockholm. They signed a memorandum of understanding that embodied Sakha's and WWF's mutual desire to extend the former Lena Delta zapovednik (strict nature reserve) by incorporating more of the delta as well as the New Siberian Islands and parts of the Laptev Sea. As a concrete symbol of joint efforts towards this goal, Sakha and WWF decided to build the Lena-Nordenskiöld International Biological Station. Sakha's president raised money from a special diamond fund for the building of the station and the planning of the reserve's extension; WWF-Sweden also contributed financial support (see AB 1/94). In July 1995 president Nikolaev and WWF International's former president, HRH Prince Philip, officially opened the biological station (see AB 3/95).

The Lena is one of the largest of Siberia's rivers, and its delta is one of the Arctic's most impressive. The former zapovednik, which covers primarily the eastern part of the river delta and the Sokol mountain district just south of the delta, is the core of the expanded reserve. Within the zapovednik, no development or change is allowed and the protection of habitat, flora and fauna is total. The recently added zones within the reserve – a zone of "specially certified harvest of biological resources" and one of "traditional nature use" – cover the rest of the delta and the New



Siberian Islands. The Sakha government hopes that the expanded nature reserve will receive the status of a "biosphere reserve" within the UNESCO "Man and the Biosphere" programme.

Sakha is known as the heart of Siberia, and is famous for its vast open spaces, contrasting types of ecosystems, and natural wealth. At 3,1 million square kilometres it forms one fifth of the whole Russian Federation and is about 13 times the size of Great Britain. Sakha has the most severe climate of any permanently inhabited place on the planet. It is a land of permafrost, which goes into the earth to a depth of over 1,000 metres. Forty percent of Sakha's territory falls within the Arctic Circle. Temperatures in the republic's Oimyakon region can be as low as -71°C , while the difference between winter and summer temperatures is at times as great as 100°C , a phenomena unknown elsewhere on the planet. Sakha has examples of all known geological features, which is why its subsurface contains all of the elements in the periodic table.

Its large mineral resources make Sakha one of Russia's richest regions. The republic contains unmatched coal resources; one-

third of its territory contains oil and gas. Sakha is famous as well for its gold mining and diamond industry. The wealth of Sakha's natural resources therefore makes it all the more impressive that the government's economic plans have gone hand in hand with farsighted decisions to protect the republic's undeveloped areas. Among these is a decision to establish a system of protected areas within the country that will ultimately cover 20% of its territory. Any activities that can damage the ecosystems in these protected areas will be prohibited. The goal of these special protection regimes is meant to exclude development in these areas and limit transport activities. So as to account for the needs of indigenous peoples living in these areas, forms of traditional nature use are permitted in parts of the protected area system.

In the last edition of the WWF *Arctic Bulletin*, we reported on another new protected area in Sakha, the 15,000 square kilometre Kytalik Reserve. Several further reserves are planned. And as some of them are in the Arctic, we expect that we will be bringing our readers more good news from Sakha.

PETER PROKOSCH

Nature Reserve Development in Russia

The Gydan Peninsula:

Protected as Russia Creates Its 96th Strict Nature Reserve

In the 2/95 *WWF Arctic Bulletin*, we reported that the Yamal-Nenets Autonomous District had decided to create a new nature reserve on the northern coast of the Gydan Peninsula. That decision is now reality. On October 7, 1996, Russian Prime Minister Victor Chernomyrdin signed Decree #1167, which created Gydansky Zapovednik (strict nature reserve) and brought the number of such reserves in Russia to 96. WWF-UK provided funds for the project.

The new nature reserve covers a large part of the diverse and untouched terrain on the northern Gydan Peninsula. The protected area contrasts sharply with the southern part of the peninsula, where huge oil and gas fields have led to extensive development. Roads, pipelines and extraction equipment cover the tundra there, threatening both the natural beauty of the area and the wildlife that inhabits it.

Gydansky Zapovednik area will help to conserve the ecosystems, flora and fauna of this region of Siberia. 34 fish species, including 11 species of sturgeon and salmon, inhabit the area. High densities of waterfowl cluster along the coastal areas, while 95 bird species have been sighted in the new nature reserve. Some of these species are already threatened and require special protection. Among them are the White-billed Diver, Bewick's Swan, the Red-breasted Goose, the Barnacle Goose, the Lesser White-fronted Goose, the Gyrfalcon and the Peregrine Falcon. Thirty-four mammal species inhabit the Gydan Peninsula and adjacent water areas. Two of these species (polar bear and walrus) are also threatened. The regional flora consists of

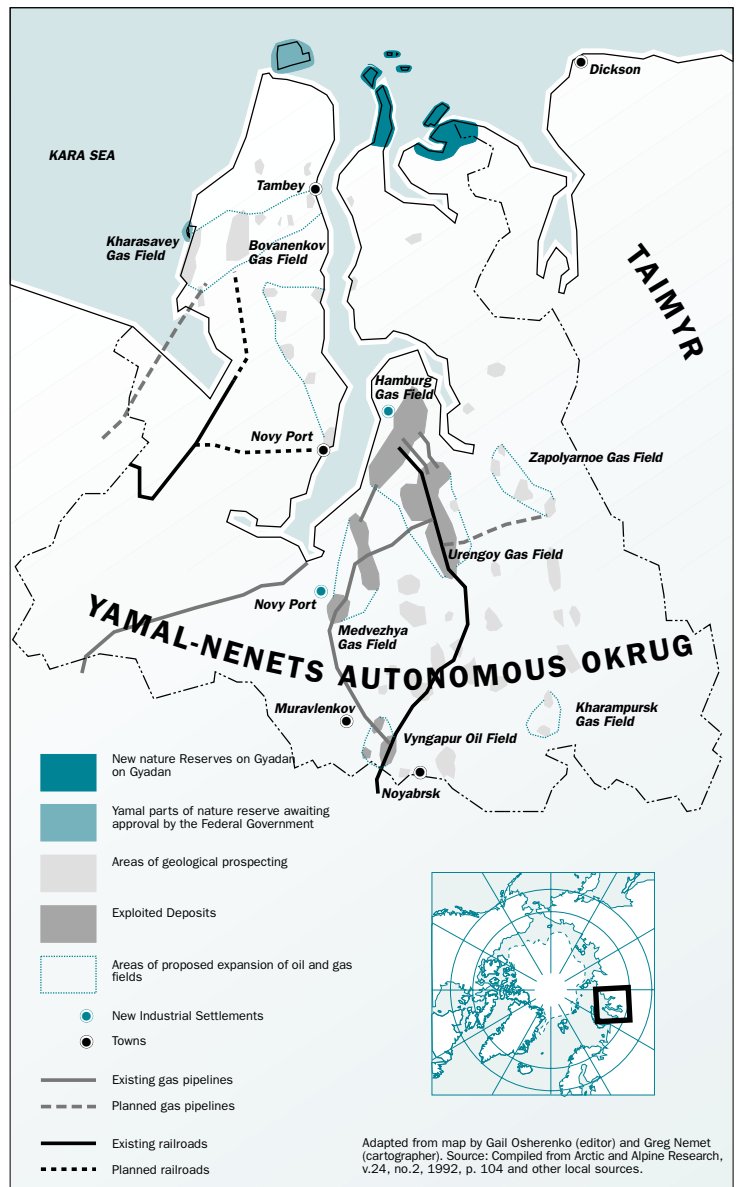
species that are characteristic of this part of Western Siberia.

In a conscious effort to represent the diversity of the area, the new reserve contains several sites that represent the region's variety of ecosystems and habitats.

The largest of these is located in the south-eastern and northern parts of the Gydan Peninsula. In addition, the protected territory includes O l e n i y , Velkitskogo, Neupokoyeva and Shokolskogo, which are islands adjacent to the peninsula. The territory of G y d a n s k y Zapovednik totals 8,782 square kilometres, and in addition covers a 1,500 square kilometre buffer zone. The buffer zone includes a 1 kilometre wide marine buffer zone along the zapovednik's coastal line, with a total area of 600 square kilometres; and a 5 kilometre wide buffer zone along the southern border of the zapovednik. The southern buffer zone passes through Yavay, Mamonta, and Gydansky Peninsulas, and has a total territory of 900 square kilometre-

tres. There are also plans to protect another 4,062 square kilometre reserve, Yamalsky Federal Zakaznik, and to combine it with Gydansky Zapovednik.

VICTOR NIKIFOROV
WWF Russian Programme Office



Nature Reserve Development in Russia

Detected by Satellite and Protected Within 16 Months:

Shoininski Reserve Established on Kanin

The Nenets Autonomous Okrug (District) Administration in north-west Russia has just taken a key step toward implementation of the international Urgent Action Plan to protect the endangered Lesser White-fronted Goose. On January 15, 1997, the Nenets government established the 164 square kilometre Shoininski State Nature Reserve in the northwestern part of the Kanin Peninsula. The area that the reserve protects is of critical importance as a spring and autumn staging area for the Lesser White-fronted Goose, a Arctic species that is threatened by extinction.

Just over a year elapsed between the creation of the Urgent Action Plan for the Lesser White-fronted Goose and the protection of the species' staging area on the

Kanin Peninsula:

September 1995: The space center in Toulouse, France received satellite signals from five Lesser White-fronted Geese in northwest Kanin. A team of researchers from the Norwegian Ornithological Society, the Norwegian Institute for Nature Research, and WWF-Finland had attached small satellite transmitters to just five geese earlier that summer. The signals gave the first indication that the tundra area in the Mesna-Torna River Delta on Kanin was of major importance as a staging area for what was probably the entire remaining Fenno-Scandinavian breeding population of the Lesser White-fronted Goose.

November 1995: At a meeting in Poland, the Goose Research Group of Wetlands International drafted an international "Urgent Action Plan for the Protection of the Lesser White-fronted Goose". The protection of the newly detected staging site on Kanin was a part of the action plan.

November 24-27, 1995: WWF International and the Norwegian Coordination Committee for Northern Areas (KNO) organised a conference in Svanvik, Norway on Protected Areas in the Barents Region. Governmental and non-governmental conservationists from Russia, Finland and Norway concluded there that further research was needed to confirm the satellite findings and to evaluate the possibility of combining habitat and species protection in northern Kanin.

January 1996: Victor Nikiforov, the WWF Russian Programme Office's Arctic expert, presented a project proposal to WWF. The proposal involved working with regional authorities in the Nenets Autonomous District

to implement their plans for a new nature reserve.

June 1996: With funds from WWF-Sweden, a small planning group started its work. The group was composed of Russian experts and headed by Anatoly Maksimuk. Their task: to investigate local conditions and possibilities for a new protected area, and to prepare and present to the government a final plan for the reserve.

September 1996: WWF-Finland organised an expedition to the Mesna-Torna River Delta. The expedition members confirmed that the area held approximately 100 Lesser White-fronted Geese, a number that corresponded to nearly the entire remaining Scandinavian and Finnish population of the species (see AB 4/96).

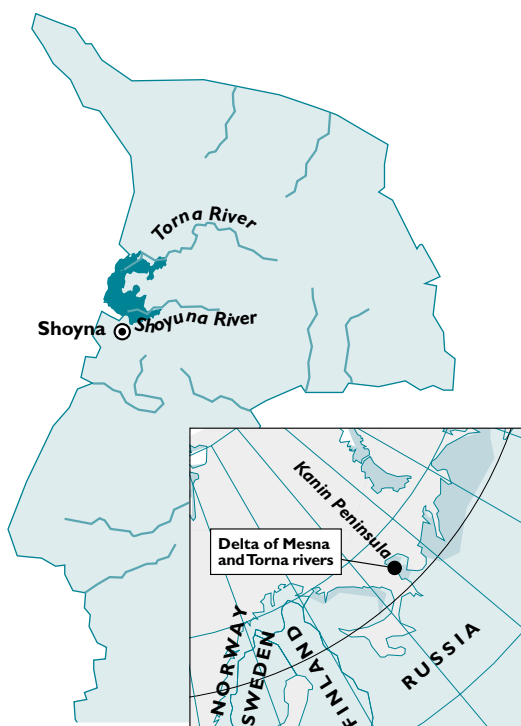
November 1996: The planning group delivered a report suggesting that the Nenets government protect at a minimum the area between the rivers Shoyna and Torna.

January 15, 1997: The Governor of the Nenets Autonomous Okrug, Vladimir Y. Butov, signed Decree No. 44, "On the Establishment of the State Nature Reserve Shoininski". The decree stated that the management of the reserve should conserve the natural conditions of the habitats in the region as well as flora and fauna. It also permitted both scientific research in the area and the grazing of domestic reindeer owned by local people.

Time will tell whether more actions to implement the Urgent Action Plan for the Lesser White-fronted Goose follow this first, quick creation of a new reserve for the species.

PETER PROKOSCH

The new Shoininski Reserve.



Who is who

IUCN – The World Conservation Union

IUCN – The World Conservation Union is a coalition of over 800 countries, government agencies and non-governmental organisations. IUCN's goal is to promote and assist the conservation of habitats and species throughout the world, and to encourage the fair and sustainable use of natural resources. IUCN's Secretariat in Gland, Switzerland coordinates the IUCN Programme, represents IUCN's members in the press and in political forums, and provides strategies, scientific expertise and services to IUCN members. In addition to supervising field projects, IUCN has helped a number of countries to develop national conservation strategies.

At the October 14–23, 1996 IUCN World Conservation Congress in Montreal, Canada, the IUCN passed three resolutions that represent a major step towards increased Arctic involvement by IUCN:

RECALLING with concern that Recommendation 19.97 of the 19th Session of the IUCN General Assembly, on protection of the Arctic environment, has not been acted upon;

RECOGNISING the achievements of the Arctic Environmental Protection Strategy, the voluntary programme of work of the eight circumpolar Arctic States;

WELCOMING the creation of an Arctic Council on 19 September 1996 as a high-level forum to address Arctic environmental protection and sustainable development issues;

NOTING that all eight circumpolar States represented in the Arctic Council and the Arctic Environmental Protection Strategy are State members of IUCN;

AWARE that the role of the Arctic

in global environmental processes, including the Earth's climate, is of interest to a broader array of nations;

RECOGNISING ALSO that non-governmental organisations participating in the work of the Arctic Council can provide valuable expertise and assistance in helping to protect environmental quality and to guide sustainable development in the Arctic;

MINDFUL of the valuable role that IUCN including its Commissions could play in working with its members to promote and support the objectives and goals of the Arctic Environmental Protection Strategy and the Arctic Council;

Resolution

The World Conservation Congress at its 1st Session in Montreal, Canada, 14–23 October 1996:

IUCN

The World Conservation Union

1. REQUESTS the Director General to apply promptly for observer status for IUCN in the Arctic Environmental Protection Strategy and the Arctic Council;

2. REQUESTS IUCN members and offices in the Arctic States, in close cooperation with the Director General, Commissions and Arctic specialists, to work together to develop and implement an action plan for Arctic conservation and sustainable development which will implement Recommendation 19.97 and will:

- a) define a specific role for IUCN in the work of the Arctic Environmental Protection Strategy, especially its Working Groups on Protection of the Arctic Marine Environment and on Conservation of Arctic Flora and Fauna;
- b) promote the development of conservation strategies and sustainable development plans that take into account the particular requirements and concerns of indigenous Arctic peoples;
- c) address the particular threats and conservation concerns in the Arctic, including, inter alia:

i) impacts from the development of offshore oil and gas resources;

ii) impacts from the development of circumpolar maritime transport routes;

iii) impacts to the marine environment from land-based activities, including the threats to the ecological and human health in the region resulting from the presence of bio-accumulating persistent organic pollutants in the Arctic food chain, impacts from deforestation and impacts from terrestrial oil and gas development;

iv) priorities for conserving Arctic flora and fauna, including the designation of a representative system of parks and protected areas;

3. CALLS UPON IUCN members to mobilise resources to help implement this Resolution.

Note: This Resolution was adopted by consensus. The delegations of the State members Norway and United States indicated that had there been a vote they would have abstained.

The use of the term "indigenous peoples" in this Resolution shall not be construed as having any implications as regards the rights which may attach to that term in international law.

For more information about the IUCN, please contact IUCN World Headquarters, Rue Mauverney 28, CH-1196 Gland, Switzerland. Tel.: +41 22 999 00 01; fax: +41 22 999 00 02, e-mail: mail@hq.iucn.ch.

WIW – Dutch Working Group of International Wetlands Experts

WIW is a working group composed of Dutch wetlands experts who work on international wetlands issues. Thanks to a recent five-year grant ►

► from WWF-Netherlands, WIW has established a secretariat. WIW's primary objectives are:

To provide a forum for the free exchange of information and opinions concerning wetlands activities outside the Netherlands that involve Dutch institutions or persons outside the Netherlands;

To promote broad-based participation in this exchange of views and information by including representatives of the government, research and

educational institutions, consulting firms, multinational companies, dredging and contractor companies, financial organisations, and NGOs;

To increase knowledge of the sustainable management of wetlands through the insight and experience gained from WIW meetings, and to provide this knowledge to WIW members.

WIW holds four meetings per year, usually organised around a special theme or a specific region. The most

recent of these meetings, on February 12, 1997, concerned the oil industry and nature conservation in Arctic Russia. The meetings provide a valuable opportunity for professionals to discuss their work with other experts, and have given rise to a number of new wetlands initiatives.

For more information about WIW, please contact Roel Sloodweg or Henri Roggeri, WIW Zuiderstraat 110, 2611 SJ Delft, The Netherlands. Tel: +31 15 2122622; fax: +31 15 2124892; e-mail: wiw@resource.nl.

Cold War's End Thaws Arctic Ocean Data

Scientific data on the Arctic Ocean collected and kept secret during the past 60 years by Russian and American researchers has been released. After freezing the data in secrecy for national security reasons, the United States and Russia have decided to make it publicly available in an effort to find solutions to global environmental problems such as climate change, air pollution, forest health and nuclear waste disposal. In a new spirit of bilateral cooperation, Vice President Al Gore of the United States and Prime Minister Viktor Chernomyrdin of Russia jointly announced the publication

of the data in January. The announcement was timed to coincide with the release of the February 1997 issue of *National Geographic*, which features an article detailing the way in which the data was collected and the reasons for its publication now.

The oceanographic data includes observations on Arctic Ocean temperature, ice depth and movement, and sea floor topography. 70 percent of the data comes from the Arctic and Antarctic Research Institute in St. Petersburg, Russia, and the remainder from the United States Navy and National Oceanic and

Atmospheric Administration (NOAA). In order to make the data more accessible, hundreds of thousands of pages of material were painstakingly digitized and recorded on a CD-ROM.

RANDALL D. SNODGRASS,
Director, Congressional Relations,
WWF-US

For more information, visit the NOAA web site at <http://ns.noaa.gov/atlas>, or contact User Services, National Snow and Ice Data Center (NSIDC), CIRES Campus Box 449, University of Colorado, Boulder, CO 80309-0449; (303) 492-6199, or e-mail nsidc_cd@kryos.colorado.edu.

WWF Contributes to Uniform Guidelines for Arctic Environmental Impact Assessments

In the last issue of the WWF *Arctic Bulletin*, we featured an article about the development of draft guidelines for Arctic Environmental Impact Assessments (EIA) by the Finnish Ministry of the Environment. Finland made the draft guidelines available for public comment, and the Arctic Programme took the opportunity to analyse and comment upon them.

Together with WWF-Canada, the Arctic Programme hired consultant Mark Hovorka to examine the draft guidelines and provide a written report to Finland. WWF delivered the report to Finland in January, 1997.

The WWF analysis emphasises the need for Arctic EIA to be clear, consistent, and sufficiently broad in scope.

Other recommendations include the need for the guidelines to:

recognise that the objective of EIA is to avoid and not simply minimise significant environmental impacts that result from development;

include the precautionary principle, end-user/polluter-pays principle, and the action alternative as essential elements of Arctic EIA;

provide concise summaries of existing EIA legislation and institutional arrangements in the Arctic nations;

require the Arctic nations to ensure consideration of traditional knowledge throughout the EIA process, so that traditional knowledge will be a part of decision-making and indigenous communities will receive feedback

before decisions are made.

WWF supports effective EIA procedures that will ensure the protection of the Arctic environment. The draft guidelines are a promising step towards this goal. Inclusion of the recommendations of WWF's analysis in the final draft will help ensure that the guidelines improve and make uniform EIA procedures throughout the Arctic.

SARAH CLIMENHAGA
WWF-Canada

To obtain copies of WWF's analysis, contact Sarah Climenhaga at: WWF-Canada, 90 Eglinton Ave. E, Suite 504, Toronto, Ontario M4P 2Z7, Canada. E-mail: sclimenhaga@wwfcanada.org

WWF-Canada Obtains Commitment to Increase Protection of Northwest Territories

On November 1, 1996 Ron Irwin, Federal Minister of Indian and Northern Affairs, and Don Morin, Premier of the Northwest Territories (NWT), gave final approval to the multi-billion dollar BHP diamond mine in the Canadian Central Arctic. Concern over the development's potential impact on wildlife ecosystems, so important to the traditional livelihoods of Dene and Dogrib communities in the region, led WWF-Canada to apply for judicial review of the federal environmental assessment panel's recommendations regarding the mine.

As well taking court action, WWF-Canada successfully appealed to its Canadian directors and supporters to write to Canadian Prime Minister Jean Chrétien to express concern about the BHP project. Though these concerns were not entirely addressed, the Canadian federal and territorial governments listened to WWF and its members, and the following commitments resulted:

1) The Canadian federal and NWT governments, led by the NWT, agreed to produce a Protected Areas Strategy for the entire NWT by 1998 and to implement the strategy by 2000. The two governments also agreed to use candidate sites identified by WWF in the Slave Geological Province of the Central Arctic as a starting point for discussion of candidate sites for protection in that region.

2) The two governments, in cooperation with aboriginal peoples and environmental groups, will provide interim protection for the highest priority sites while the Protected Areas Strategy is being developed. First Nations in the NWT already have suggested candidate areas for interim protection.

3) The federal government has stated in writing to WWF that it is prepared to change federal environmental assessment procedures so that in the future, any projects subject to Canada's Environmental Assessment Act will take into consideration the impact of the

project on both *existing* protected areas and on *the opportunity to complete a network* of protected areas for the natural region in which the project is located.

WWF-Canada withdrew its application for judicial review on January 13, and now intends to make sure that Canada's federal and territorial governments honor these commitments.

SARAH CLIMENHAGA
WWF-Canada



BNP/Dia Met bulk sampling plant at Lac de Gras, Canada



Photo: Peter Prohász

The nickel industry in Norilsk is the largest source of air pollution in Russia.

Norilsk Nickel:

Russia Wrestles with an Old Polluter*

Norilsk Nickel, a recently privatized firm, is one of Russia's leading producers of nonferrous and platinum-group metals. It controls one-third of the world's nickel deposits and accounts for a substantial portion of Russia's total production of nickel, cobalt, platinum, and palladium. It is also a major polluter, ranking first among Russian industrial enterprises in terms of air pollution and causing acid precipitation in both Russia and Scandinavia.

Norilsk Nickel employed 162,000 people in 1995 and has had annual sales of about \$2 billion USD in recent years. Norilsk has four main centers of operation: a mining and metal processing facility at Norilsk in northeastern Siberia (see map); a metal processing facility at Monchegorsk on the Kola Peninsula (Severo Nickel); mining and metal processing facilities at Zapolyarny and Nikel on the Kola Peninsula (Pechenga Nickel); and a precious metals processing plant in Krasnoyarsk in central Siberia. The company was privatized in 1993.

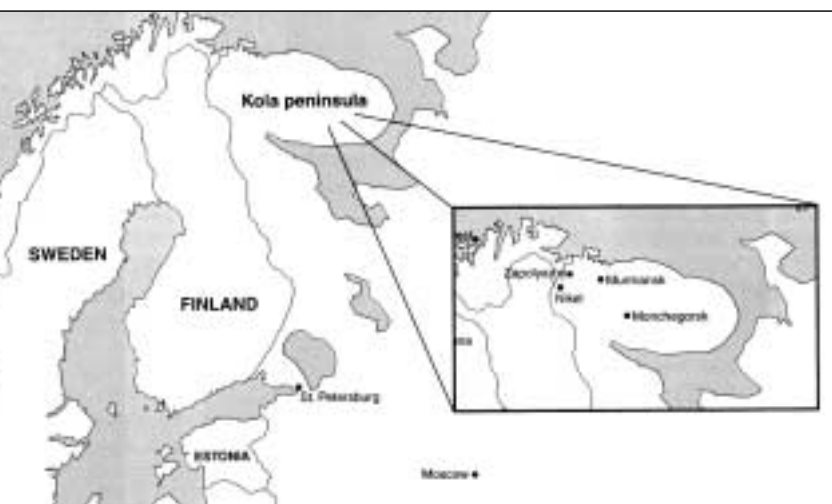
Norilsk Nickel and its subsidiaries are the largest sources of air pollution in Russia. According to the official figures, which are undoubtedly far too low, the parent company in northeastern Siberia emitted nearly 2 million tons of air pollutants in 1994, virtu-

ally all of them in the form of sulfur dioxide. That same year Severo Nickel emitted approximately 111,000 tons and Pechenga Nickel 133,000 tons. Owing to their size, Norilsk Nickel's facilities have a large impact on overall environmental conditions in the areas where they are located. The specific locations of these facilities compound the problem. With the exception of the plant at Krasnoyarsk, all of them are situated north of the Arctic Circle, a region where ecosystems are relatively fragile and lack the assimilative capacity of those in lower latitudes. As a result, Norilsk Nickel's activities have led to wide-ranging environmental degradation.

On the Kola Peninsula, for instance, an estimated 81 square kilometres of land have been damaged beyond rehabilitation. An additional 1,260 square kilometres of forested lands, including one-third of a nature reserve in the Murmansk region as well as areas inhabited by indigenous peoples, have suffered. Health problems have also appeared. According to official statistics, Monchegorsk and Norilsk are among the 11 Russian cities with highest rates of disease among children under 14 due to air pollution. The situation in northeastern Siberia is even worse. In that region, acid precipitation has destroyed 1,800 square kilometres of forest and damaged an additional 3,820 square kilometres. Trees have ceased to reproduce and primary productivity is at a minimum within a 120 kilometer radius of Norilsk's facility.

The emissions of sulfur dioxide by Norilsk's Kola facilities are not just a problem for Russia, however, because a significant portion of these emissions flows across the border into Finland, Norway, and Sweden. In fact, data for 1992 indicate that the releases from the company's two smelters vastly exceeded the total releases of those three countries combined.

Efforts to address this problem have been made at both the domestic and international levels since the late 1970s. In 1979, the Soviet Union signed the international Convention on Long-Range Transboundary Air Pollution (LRTAP). Russia has already met the goals in that agree-



ment and in two subsequent protocols. There have also been efforts at the bilateral level, primarily with Finland and Norway.

International commitments, with their emphasis on explicit goals, can have contradictory effects on environmental performance. What happened at Norilsk Nickel illustrates this perfectly. By 1993, the company's two facilities on the Kola Peninsula were in nominal compliance with the initial goal of reducing sulfur dioxide emissions 30 percent. Operational changes (primarily the installation of some scrubbers) accounted for only a fraction of the improvement, however. Most of it was due to a downturn in production as a result of the country's severe economic crisis.

What is especially disturbing is that these emissions decreased much less than Norilsk's output of nickel. At the Severo plant, for instance, emissions of sulfur dioxide declined 30 percent while output declined 50 percent from 1989 levels. Aging equipment and outmoded technology largely account for the discrepancy. The implication of this turn of events is that Norilsk Nickel's environmental problems have merely been masked – not solved. Until the company invests in cleaner technology, its environmental gains will largely be a mirage.

Why hasn't Norilsk made more of an attempt to curb its pollution? In part, this is because the outmoded technology at Norilsk's plants does not permit any further reductions in sulfur emissions. More importantly, however, political and economic changes in the former Soviet Union have made it impossible for the government to enforce compliance with economic standards, and have given industry little or no incentive to comply of its own accord. Though the former Ministry of the Environment has instituted a system of fines for pollution of various kinds, the system has not been very effective because the fees being assessed are much lower than the cost of investing in more environmentally responsible technology. In addition, the Russian government cannot strictly enforce the system of fines because to do so might cause the bankruptcy of

firms in which it has an interest, such as two of Norilsk's subsidiaries. Finally, the general weakness of the Russian government offers producers another means of avoiding pollution charges: simply not paying them.

Compounding the problem of governing is Russia's shift to a more federal system with greater regional autonomy. In Norilsk Nickel's case, local authorities use uniform national standards to determine the amount of pollutants Norilsk may emit as well as the fees it must pay. The company's two facilities, however, account for nearly three-fourths of the tax revenues collected in the Murmansk region. Authorities at all levels therefore have been unwilling simply to close Norilsk's Kola facilities.

A final problem is that few owners or managers, many of whom are holdovers from the Soviet era, have any real commitment to the enterprises in their charge. On the contrary, they are often interested only in enriching themselves as quickly as possible. The chaotic period that followed Norilsk's privatization illustrates this problem perfectly. Neither the Russian government, which retained a majority interest in the company after privatization, nor the other nominal owners of Norilsk Nickel were able to exercise effective control over the enterprise. Largely unaccountable to anyone, Norilsk's management ran the company for personal profit rather than long-term viability. Naturally, they were not interested in making investments to benefit the environment.

The Russian government recently accepted an offer from a consortium of Swedish and Norwegian companies for upgrading the facilities of Pechenga Nickel. Estimates of the project's costs range from \$250 million to \$297 million. Its purpose is not merely to cut Pechenga's emissions of sulfur dioxide by as much as 95 percent but also to enable Pechenga to use locally mined, low-sulfur ore in its smelting operations.

This project will not be carried out, however, unless Norilsk's management begins to support it actively. For a long time,

it claimed that the firm simply could not afford such a large investment. But although the cost of the project is indeed high, there appear to be adequate sources of funding. A law enacted in the summer of 1995 authorizes the Russian government to contribute \$42 million, and the government of Norway has pledged the same amount. Even more important, at the company's insistence the Russian government granted Norilsk substantial tax concessions for this purpose.

The real problem lies in the management's complete unwillingness to invest Norilsk's revenues in the company instead of diverting them to their own pockets. That Norilsk has substantial financial resources is shown by the fact that to maintain their control, the board of directors even proposed using company funds to purchase the government's shares. Then they used their bargaining power with the Russian government to avoid paying for the refurbishments at Pechenga. How these developments will ultimately play out is difficult to say, but those wishing to protect Russia's environment would do well to recall the survival strategy of the gulag prisoners who originally built Norilsk Nickel: "Trust nobody, fear nothing, never beg."

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* A longer version of this article, including references, appeared in *Environment*, vol. 38 number 9, pp. 7-11 and 32-37, November 1996. Excerpted with permission of the Helen Dwight Reid Educational Foundation. Published by Heldref Publications, 1319 18th Street, NW, Washington, DC 20036-1802. Copyright 1996.



Photo: Peter Prokosh

Huge areas of the forest surrounding Norilsk look almost dead.

Arctic Publications

- CLAES BERNES:
The Nordic Arctic Environment – Unspoilt, Exploited, Polluted?
 The Nordic Council of Ministers, Copenhagen (1996)

The Nordic Arctic Environment is the second in a series of reports by the Nordic Council of Ministers on the condi-

viewed and corrected.

The well-illustrated report begins with chapters containing general information about Arctic geography, climate, peoples, flora, and fauna. Later chapters address environmental issues such as fishing and fish stocks, climate change, industrialisation, and organic pollution. The chapters are quite detailed and informative, containing a mixture of general information for non-experts and relatively technical scientific material.

The Nordic Arctic Environment is remarkably forthcoming about the region's environmental problems, particularly when one considers that it is a government publication.

The last chapter of the report, which consists of the project group's conclusions about the state of the Nordic Arctic environment, is especially thought-provoking. Among other things, the project group concludes that overdepletion of shared natural resources (the

"tragedy of the commons") is very difficult to avoid. Using examples ranging from carbon dioxide emissions to fisheries, the project group points out that even proper regulation cannot always ensure that the

long-term interest of sustainable resource use takes precedence over the individual, short-term interest of exploiting the resource to and past its limit. Surprisingly, the project group concludes that overfishing in Arctic seas has not caused large losses to fisheries there. This conclusion contrasts sharply with that of the European Environment Agency and the Norwegian Polar Institute. In *The State of the European Arctic Environment*, these entities concluded that "[f]isheries represent the greatest impact on the marine ecosystem in the European Arctic."

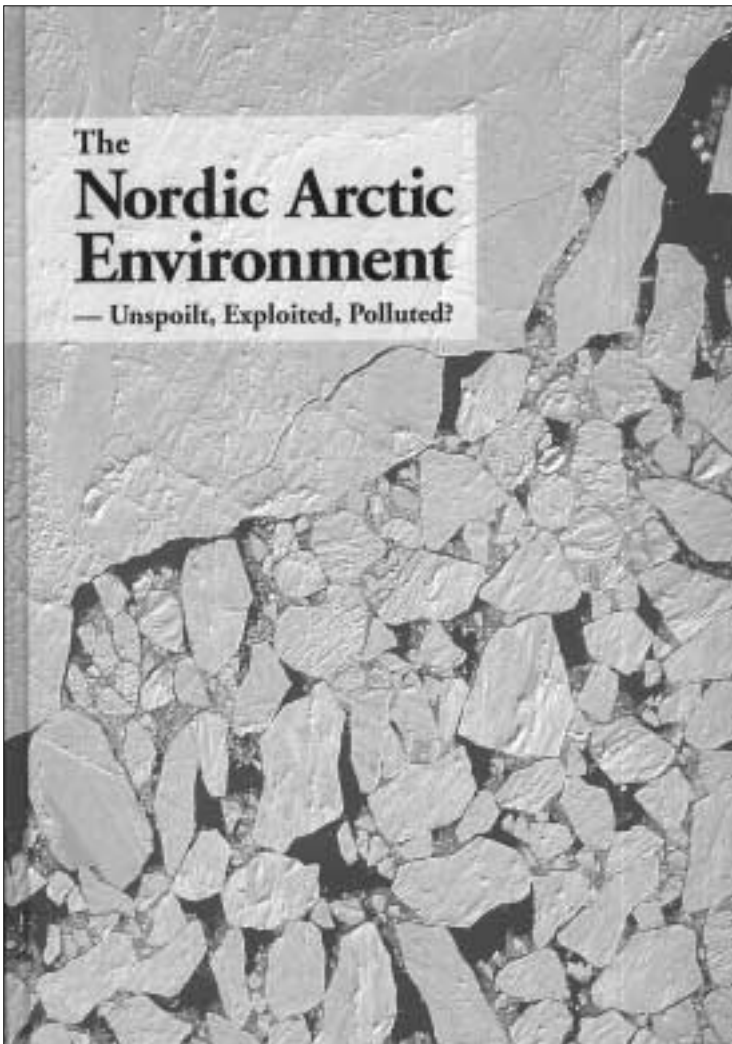
My only criticism of the report is that it is not always successful in its attempt to incorporate state-of-the-art scientific information into a format accessible to the general reader. The report is both a little too dense for the average reader, and not quite scientific enough for use as a reference work. For non-scientists involved in Arctic policy and politics, however, it is just right.

SAMANTHA J. SMITH

- BRYAN & CHERRY ALEXANDER:
The Vanishing Arctic
 Blandford, London (1996)

Through stunning photographs and insightful text, *The Vanishing Arctic* documents the lives of families from five different Arctic indigenous groups. Over a ten year period, co-author Bryan Alexander lived and worked with families of Inuit from Northwest Greenland, Canadian Sub-Arctic Cree, Norwegian Saami, Eastern Canadian Inuit, and Siberian Nenets. The result of his experiences is a highly personal yet perceptive account that captures the daily lives of these families and their traditional ways. The accompanying photographs create a visual record that perfectly complements the text.

SAMANTHA J. SMITH



tion of the Nordic environment. A project group composed primarily of members of the environmental ministries of the Nordic countries prepared a draft, which Nordic environmental experts then re-

FORTHCOMING ARCTIC MEETINGS

Title	Where	When	Contact
Meetings of the Arctic Council and the Rovaniemi Process			
AEPS/Arctic Council Senior Arctic (Affairs) Officials Meetings	Kautokeino, Norway	March 11–14, 1997	AEPS Secretariat, Gunnbjørg Nāvik. Tel.: + 47 22 24 59 74. Fax: + 47 22 24 27 55 . Arctic Council Secretariat, Mary Vandenhoff Tel.: + 1 613 941-4011. Fax: + 1 613 941 6490.
4th AEPS Ministerial	Alta, Norway	June 12–13, 1997	AEPS Secretariat, Gunnbjørg Nāvik. Tel.: + 47 22245974. Fax: + 47 22242755.
AMAP International Symposium on Environmental Pollution of the Arctic	Tromsø, Norway	June 1–5, 1997	AMAP Secretariat P.O. Box 8100 Dep, N-0032 Oslo, Norway. Fax: + 47 22 67 67 06. E-mail: lars-otto.reiersen@ sftospost.md.dep.telemax.no
CAFF Annual Meeting and Analytical Working Group Workshop	Nuuk, Greenland	September 26 to October 1, 1997	CAFF Secretariat, Hafnarstaeti 97 P.O. Box 375, IS-600 Akreyri, Iceland Fax: +354 462 3390. E-mail: snorri@natffs.is
IASC Annual Meeting, Council Meeting, and Regional Board Meeting	St. Petersburg, Russia	May 5–7, 1997	IASC Secretariat P.O. Box 5072 Majorstua, 0301 Oslo, Norway Tel.: +47 22 95 96 00, Fax: +47 22 95 96 01 E-mail: iasc@npolar.no
International Symposium on Objectives & Uncertainties in Fisheries Management	Bergen, Norway	June 3–5, 1997	Arild Folkvord, Department of Fisheries and Marine Biology, University of Bergen, Norway. Fax: +47 55584450, E-mail: arild.folkvord@ifm.uib.no
Circumpolar Change: Fifth Circumpolar Universities Cooperation Conference	Luleå, Sweden	June 10–12, 1997	Paula Wennberg, Luleå University Fax: +46 92072160 E-mail: cucc@ies.luth.se
Northern Women, Northern Lives 1997	Tromsø, Norway	June 21–24, 1997	Therese Nyborg, Tel.: +47 77 64 64 66, Fax: +47 77 64 64 20
The Arctic Environment and Food Festival	Tromsø, Norway	June 21–25, 1997	Ragnhild Sandøy Tel.: +47 77 68 45 17, Fax: +47 77 68 45 17
Seminar/Workshop: Contaminants in Freezing Ground	Cambridge, United Kingdom	July 14–15, 1997	W. Gareth Rees, Scott Polar Research Institute Lensfield Road, Cambridge, CB2 1ER, UK
International Symposium on Fishery Stock Assessment Models for the 21st Century	Anchorage, Alaska, USA	October 8–11, 1997	Brenda Baxter, Alaska Sea Grant College Program University of Alaska, Fairbanks, Fairbanks, USA E-mail:FNBRB@aurora.alaska.edu
6th World Wilderness Congress	Bangalore, India	October 18–25, 1997	Alan Watson, Leopold Institute P.O. Box 8089, Missculla, MT 59807 USA Tel.: +1 406 542 4197, Fax: +1 406 543 2663
Polar Processes and Global Climate	Orcas Island, Washington, USA	November 3–6, 1997	Roger Colony, IAPO P.O. Box 5072 Majorstua, N-0301Oslo, Norway E-mail:acsys@npolar.no

Notice:

New Date and Location for 4th AEPS Ministerial Meeting

Due to scheduling conflicts, the date and location of the 4th AEPS Ministerial Meeting have been changed. The meeting, which was

scheduled to take place on June 26–27, 1997 in Tromsø, Norway, will now take place on June 12–13, 1997 in Alta, Norway. Please contact the

AEPS Secretariat for additional information at +47 22 24 59 74 (tel.) or +47 22 24 27 55 (fax).

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