

Projects for possible co-operation between the Arctic Council and the European Commission on Arctic issues.

Introduction

The Arctic Council has been pleased to work with the European Commission on developing The Second Northern Dimension Action Plan over the past year. The Council took part in the Ministerial Conference on The Northern Dimension in Luxemburg in October 2002 and participated in the meeting of the Commission services and the chairs of the regional bodies concerned with The Northern Dimension in Brussels in March 2003. In addition, the Council presented written comments on the guidelines from the Luxemburg conference in the form of an overview of Arctic Council priorities and activities.

Confident that the Action Plan will serve as an important tool for enhanced synergy and coherence among the different Northern partners, the Arctic Council, in co-operation with the European Commission, now wishes to take the co-operation to the next stage. To this end, the Council has identified several projects for possible co-operation with the European Commission on the basis of the Plan.

The list should be considered as an invitation to the Commission to carefully consider co-operation with the Arctic Council on any or all of the projects covered. The projects are listed in accordance with the draft agenda set up for the joint European Commission and Arctic Council workshop scheduled for the first half of the coming year.

The list consists mainly of project descriptions. More specific definitions regarding the role of either party in a given project would have to be worked out provided there is mutual interest in it.

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Adapting to Climate Change in the Arctic

Arctic Climate Impact Assessment (ACIA)

In an effort to strengthen the scientific knowledge of climate change in the Arctic and to suggest ways of dealing with it, the Arctic states have launched, under the lead of the United States and in co-operation with the International Arctic Science Committee (IASC), the so-called Arctic Climate Impact Assessment (ACIA).

The assessment will be the first comprehensive regionally based study of climate change to be published since the United Nations Framework Convention on Climate Change. Its goal is to evaluate and synthesize knowledge on climate variability and change and its consequences and provide useful and reliable information to governments, the international community and the people of the Arctic region and support policy-making processes. The results of the assessment should be completed by the autumn of 2004.

The scientific part of the ACIA will, among other things, analyze past and current climate and UV changes, as well as future projections. It will look into physical and biological systems and their responses to changes across the Arctic region and its impacts on residents. The assessment will also identify existing gaps in our knowledge of climate change.

In addition, the ACIA will examine the social and economic impacts of climate change and its consequences for human health in the Arctic and recommend appropriate policy responses.

Assessment of climate change in the Arctic is highly relevant for other parts of the world and contributes to a common understanding of global climate change. It is important to note that the Arctic, as the place where rapid and amplified warming is expected to occur, can act as an early warning of global climate change.

Therefore, it is important to ensure the integration of the ACIA with ongoing assessments and related activities with an Arctic focus. The Arctic Council favors closer co-operation with international organizations on issues related to climate change, including the European Union (EU), using, among other things, the results of the ACIA.

The Human Dimension of the Arctic: Challenges and Opportunities

Arctic Human Development Report (AHDR)

In its efforts to strengthen the work of the Arctic Council concerning the social and economic aspects of Arctic co-operation, Ministers of the Arctic Council launched,

under Iceland's lead, an extensive report on human development, the so-called Arctic Human Development Report. The report, scheduled for delivery at the Ministerial in November 2004, will be a comprehensive assessment of human conditions in the entire circumpolar region. The main goal is to provide an overview of sustainable development in the Arctic and to identify the main factors that affect the well-being of its people. The report will call attention to the many and varied elements involved in human development and prosperity in the north, both among indigenous people and other inhabitants of the area. The social, economic and cultural conditions of the inhabitants of the Arctic, their connection with sustainable development and the utilization of natural resources, will be a focal concern. The involvement of the European Commission in this project could serve the purpose of commonly establishing a knowledge base for defining actual projects for co-operation in the field of human development in the future.

Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka (SLICA)

SLICA is a joint international project that conducts a comparative study of living conditions among the Inuit and Saami peoples, including the Saami population of the Kola Peninsula, and the indigenous peoples of Chukotka in respectively United States, Canada, Greenland, Norway, Sweden, Finland and Russia.

SLICA was initiated in 1997 and is expected to end 2004 in a comprehensive report summarizing the findings of the study. The data collection includes 23.000 personal interviews.

There are approximately 1600 Saami living on the Kola Peninsula. 400 individuals from this population will be interviewed. Since SLICA is focusing especially on social and economic change, the Kola Saami population is extremely important to the survey as the population over time has had to adapt their indigenous lifestyle to a radical changing political and economic environment.

The major objectives of SLICA are:

- To develop a new research design for comparative investigations of the living conditions of the involved groups. This will include the drawing-up of a battery of nominal and operationalised indicators of living conditions based on earlier theoretical literature and consultations with indigenous peoples' organisations and public hearings.
- To map the living conditions in a way that will facilitate inter- and intra-national comparisons of the level of the living conditions in a number of dimensions.
- To carry out a comparative, dynamic social analysis of the causal relations between different individual resources and between individual well-being and different political, economic, cultural and technological settings.
- To create an improved basis for local as well as national decision-making in relation to policy planning and implementation.

The International Circumpolar Surveillance (ICS): Prevention and Control of Emerging Infectious Diseases in the Arctic.

The International Circumpolar Surveillance of Emerging Infectious Diseases was approved at the Arctic Council Ministerial meeting in Barrow, Alaska, 2000.

The purpose of this project is to establish an integrated International Circumpolar Surveillance (ICS) system for infectious diseases by establishing a network of hospital and public health laboratories throughout the Arctic. The network would allow collection and sharing of uniform laboratory and epidemiological data between Arctic countries that will describe the prevalence of infectious diseases of concern to Arctic residents and assist in the formulation of prevention and control strategies.

Project deliverables at the 2004 Arctic Council Ministerial meeting will include a comprehensive report on invasive bacterial diseases caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Neisseria meningitidis*, Group A & B streptococcus in Arctic populations and the status of preventive measures being undertaken by the public health authorities within each participating country.

The Future of Children and Youth of the Arctic Project; Health Programme

The overall goals of the project are to improve the health and well-being of children and youth of the Arctic and improve the basis of sound decision-making by increasing the knowledge and understanding of sustainable development among Arctic youth and children.

Objectives of the Programme

- examination of existing baseline data and studies in key areas that are related to the health of children and youth in the circumpolar region and identification of gaps therein;
- assessment of processes and approaches used at international, national, regional and community levels that might provide models for actions on the Arctic regions; and
- an action plan that takes into account the results of the two previously mentioned objectives, the nature of specific issues, and scientific and traditional knowledge as appropriate that will lead to the elimination or mitigation of problems associated with health.

A report including an analysis of the data supplied by each Arctic Council member state, including recommendations for policy consideration will be presented in 2004.

The programme could benefit from the experience of the European Commission in the area of children and youth programmes since one of its objectives is to assess processes and approaches used at international, national, regional and community levels that might provide models for action in Arctic regions - the development of a list of best practices could be applicable in the Arctic.

The opportunities offered by Information Technology

Information and Communication Technology

Information and Communication Technology (ICT), as a tool for development in the Arctic, is one of the key priorities of the Icelandic Chairmanship of the Arctic Council. To address this issue, Iceland organized an international conference on ICT in the Arctic in October 2003, with special emphasis on distance education and telemedicine.

Small remote communities, long distances and a general lack of effective infrastructure and communication characterize life in most of the Arctic. Information technology can therefore be an extremely valuable tool and a major contributor to sustainable development, capacity-building and human health and welfare in the region. For this reason, it is essential that Arctic residents be given access to cost-effective telecommunication systems with sufficient carrying capacity. The October conference concluded among other things that the lack of basic ICT services in the most rural areas of the Arctic prevent the residents of the region from developing their full potential.

The aim of the Arctic Council Chair is now to translate the outcome of the conference into practical steps that could be taken to guide policy as regards the use of ICT in the Arctic. Working together with the European Commission on realizing common objectives in this field, in particular as regards telemedicine and distance education, as laid down in the Second Northern Dimension Action Plan would bring added value to this work and could serve the interest of both parties.

Actions to eliminate pollution in the Arctic and environmental monitoring and Research

Multilateral Co-operative Project for phase-out of PCB use, and management of PCB-contaminated wastes in the Russian Federation

This project assists Russia in finding ways to phase out PCBs. The project covers all stages of PCB problem solving; Inventory and assessment of the problem and development of priority actions (phase 1), development of technical and economic proposals for solutions (phase 2, feasibility studies), and practical demonstration of technical solutions (phase 3, implementation of pilot projects).

Phase 1 and 2 are completed, and phase 3 is in progress. Ongoing Phase 3 activities, including duration and financial situation are presented in the table below.

Activity	Objective	Description	Approx. cost & duration
Cleaning of transformers	100 transformers with about 250 tonnes PCB	Emptying, cleaning and disposal of transformers in regions affecting the Arctic	0.9 million USD, 2Years
Destruction of	250 tonnes PCB	Collection, draining and destruction of	1-2 million USD,

liquid PCB	from the trans-formers	PCB fluids from transformers in regions affecting the Arctic	3Years
Destruction of capacitors	12.000 capacitors with ca. 200 tonnes PCB	Collection and destruction of capacitors in regions affecting the Arctic	8 million USD (plasma arc tech.), +1-1.5 million USD, 3Years
Collection and storage of electrical equipment containing PCB	30-40 tonnes PCB (Leningrad Oblast and St. Petersburg)	Development of means of identification, labelling, collection and storage of PCB from transformers on an oblast scale for a region affecting the Arctic	230,000 USD 1Year

Additional to the demonstration projects presented in the table, a demonstration project on remediation of contaminated sites is under consideration, and may be presented at a later stage.

AMAP secretariat, Nordic Environmental Finance Corporation (NEFCO) and UNEP Chemicals participate in the project. NEFCO will fully finance the liquid PCB-waste demo-projects pertaining to cleaning of transformers. The USA has offered to deliver a complete facility (plasma arc-technology) for the destruction of PCB-contaminated capacitors. A detailed feasibility study to adjust the technology is currently being carried out.

Evaluation of Dioxins and Furans in the Russian Federation

The project aims at reducing emissions of dioxins and furans from identified sources in northwest Russia, by means of technology and information transfer. The project will also contribute to harmonise Russian sampling techniques and analytical capabilities to European standards. Three priority regions have been selected: Murmansk, Archangelsk and Komi.

The inventory (Phase I) is needed to design the project and to setting priorities. Based on the inventory and other available information, e.g. production volumes, smoke stack gas emission volumes per year, 2–3 hot spots will be identified and specific industrial plants selected for each type of industries for sampling. The sample types recommended for analysis are water, smoke stacks emissions (gas phase) and/or sludge depending on the type of industry. This phase is fully financed and will be finalised in March 2004. Phase II (Feasibility study), will involve consolidation of results and exploration of options for implementation of control requirements e.g. legislation or implementation of pollution prevention measures and prescription of technical reduction measures such as Best Available Technics (BAT) and Best Environmental Practices (BEP), setting commitments by industries etc. Phase III (Implementation), will involve upgrading/retrofitting for source reduction/elimination of priority dioxin and furan sources.

As a part of the project, the incorporation of a cleaner production programme in the city industry and municipal services of Krasnoyarsk is proposed (See Cleaner Production project in Norilsk). This activity would look for improvements in industrial municipal processes and would have the potential of reducing emissions of

dioxins in the order of 2-300 grams per year. A full description of this activity proposal is currently is being developed.

The AMAP secretariat and UNEP Chemicals participate in the project.

Reduction of Atmospheric Mercury releases from Arctic States

The objective of the project is to identify important anthropogenic source categories for mercury emission within the Arctic countries, and to initiate cost effective reduction measures at one or a few specific sources as pilot projects. Phase I of the project include a mercury release inventory, mercury use and waste related characterisation, and the prioritising of actions. The inventory is being made through questionnaires and with technical support to the Russian Federation. All possible major anthropogenic sources are being considered, such as metallurgical and mineralurgical industry, waste incineration, coal fired power plants, chloroalkaline industry, and other production facilities or activities releasing mercury. An assessment of the submitted inventories for all countries will be presented in January 2004.

Phase II which include the development of proposals for cost-effective reduction measures at one or a few specific sources, presumably in Russia (pilot projects). A framework for an Arctic circumpolar action plan and strategy for mercury reduction will be prepared with expert support from all Arctic member states. Phase III will involve implementation of pilot/demonstration project(s).

The AMAP secretariat and UNEP Chemicals participate in the project.

Environmentally sound management of stocks of obsolete pesticides in the Russian Federation

The project is aimed at the safe disposal and/or destruction of the stockpiles of obsolete pesticides in prioritised Arctic regions of Russia, and should be considered as an initial part of a future countrywide programme aimed at this issue in Russia. The inventory will include all types of obsolete pesticides, including pesticides used for agricultural purposes, for animal husbandry, forestry management, insect control, rodent control, pesticides used by the military, oil industry, etc.

The Project consists of several activities implemented in three phases. Phase I will result in a comprehensive inventory of stocks of obsolete pesticides showing the magnitude of the problem and the types of stocks (including screening analysis for unidentified stockpiles). On the basis of the results of the inventory, preparatory/preventive measures, aimed at improvement of storage conditions and redeployment/consolidation of stocks, will be selected and introduced into practice, and an action plan for future destruction/disposal phase will be developed (Phase 2). This destruction/disposal action plan will be implemented starting with a pilot plant operation, which may require adaptation of the existing facilities (Phase 3). This work is closely coordinated with the PCB-project.

The inventory of obsolete pesticides in ten priority regions is currently being completed. The Arkhangelsk Region is selected as a Demonstration Region for the

Project. The inventory is based on an assessment of what regions would have most impact of the Arctic and other criteria (e.g. practical implementation). For the Arkhangelsk Region the further work will be:

- Complete inventory of the stockpiles of obsolete pesticides in the Arkhangelsk Region;
- Complete screening analyses of selected a stockpile;
- Complete demonstration project of repackaging of the stockpile of obsolete pesticides at a selected stockpile;

The AMAP secretariat and UNEP Chemicals participate in the project.

Implementation of Cleaner Production, Eco-efficiency and Environmental Management Systems in the Production Units and Management of the OJSC Norilsk Mining Company in Norilsk, Russia

The project aims to train engineers and advisers of the Norilsk company, to achieve economically sound environmental improvements of industrial processes. This will in turn reduce emissions to the atmosphere, at present amounting to nearly 3 million tonnes per year of sulfur dioxide (SO_2) as well as non-ferrous metals dust and other toxic substances.

Two training seminars for managers and engineers have been completed. Forty eight (48) managers and engineers are “certified” in the skills of analysing the different industrial processes in order to reduce costs and environmental pollutant releases. They have also been educated in the financial aspects of engineering projects. Around 130 project proposals aiming for environmental improvements have been developed. Fifty of these projects are low-cost projects that are under implementation and 81 are medium-to-high-cost projects.

Some expected reductions, for the 130 projects, are: fresh water - 65 million m^3 , waste water discharge – 18,3 million m^3 , natural gas - 175 million m^3 and SO_2 - 1,2 million tons. The economic savings are estimated at 189 million USD per year, and the investments needed are approximately 460 million USD. Particulates and CO_2 emissions have already been reduced by several thousand tonnes, and water and natural gas consumption have also declined. The large projects need financing from international development banks, thus they will need two to three years before they are eventually implemented.

The Cleaner Production training has motivated the company to implement Environment investment projects without external funding support. Norilsk Nickel has recently launched a programme aiming to install an integrated system of quality control and the management of environmental protection at its main operational divisions, meeting the requirements of the ISO 9001:2000 and ISO 14001:1996 international standards. The Norilsk company are presently conducting the 3rd CP training Programme this year at its own cost.

As a new activity of the project a proposal of introducing the Cleaner Production Training Programme as a part of the curriculum of the Norilsk Industrial Institute (educating engineers) is currently being developed.

Based on experience, the results of the Cleaner Production (CP) activities show on average that Russian companies, without external financing, may easily reduce resource consumption and discharges to one third of their previous levels. Results are quickly achieved and investments are repaid within a short period (1-2 years).

Mercury Contamination

AMAP documents the extent of mercury contamination in the Arctic and its associated trends and effects. AMAP is involved in the construction of both regional and global inventories of mercury emissions and in modelling activities to assess the long-range transport of mercury. Of particular interest is the discovery of mechanisms, which enhance mercury deposition in the Arctic, associated with photochemistry that occurs at polar sunrise. These mechanisms appear to deliver mercury to the Arctic in a reactive form at a time when it can enter food webs. The high dietary exposure of some indigenous peoples in the Arctic to mercury is of major concern within several Arctic countries. The Arctic Council Action Plan (ACAP) has initiated a mercury project with the aim of identifying and implementing actions that can reduce mercury emissions within the Arctic countries.

The Arctic Council has made plans to encourage expanded and accelerated research on critical aspects of mercury cycle and equilibrium in the Arctic and promote efforts at the global, regional and national levels to quantify all sources of mercury and report results in a consistent and regular manner to improve emission inventories. Furthermore to continue temporal trend monitoring and the assessment of effects of mercury in key indicator media and biota.

Effects of local and long-range pollution on the health

The Arctic Monitoring and Assessment Programme (AMAP), together with the Russian Government and the Russian Association of Indigenous Peoples of the North (RAIPON), currently implements a project on the effects of local and long range pollution (by persistent organics and mercury, among others) on the health and lifestyles of selected indigenous peoples of the North. The project is funded by all member states of the Arctic Council and the Global Environmental Facility (GEF). AMAP has been requested by RAIPON, the Russian Ministry of Health and the GEF Secretariat in Nairobi, to investigate raising additional co-funding to secure the implementation of an extension of the project to cover two or three additional areas in Northern Russia.

Freshwater hydrology of three large Russian rivers and its effects on climate

Over the last year, AMAP, together with the Russian Government, has implemented a pilot project on the Lena basin. A report from this project was presented to the World Water Forum in Japan in May 2003 and was received with great interest. At the request of the Russian government, AMAP intends to continue this cooperation and implement a larger study on three major Siberian rivers. Increased runoff from Russian rivers in recent years, associated with climate change, has been documented, and is expected to continue. This may have several feedback effects on global climate through, e.g., sea ice formation, deep-water formation, etc. The link between the

runoff of Siberian rivers and possibly impacts on the climate in parts of Europe is just one example of the significant relationship between developments in the Arctic and potential impacts on global climatic change. Co-operation with the European Commission would be most valuable in this respect.

Circumpolar Biodiversity Monitoring Program (CBMP)

The CBMP was created to improve understanding of changes in circumpolar biodiversity through the harmonization of current monitoring programs, identifying and filling gaps in monitoring activities, the sharing of collective information, and encouraging cooperative analysis. This will occur through the creation of government, research and other networks; the transfer of information between government, research institutes and other parties; and the development of regional and circumpolar models to predict future impacts of global changes, such as climate change, on biodiversity. Aspects of the program are under implementation such as the identification and operationalization of eight networks, and identification of different partners and terrestrial observational networks.

Environmental monitoring, divided into physical and biological monitoring, is essential to maintaining the Arctic in its pristine state, to continuously evaluate natural and human related changes, and to permit the sustainable use of renewable resources, the utilization of other natural resources, and the conservation of biodiversity. The primary objectives of the CBMP are to detect changes and causes of changes in the environment as related to biodiversity, to provide an early warning system that could trigger more specific research and conservation measures, to contribute to the development and evaluation of national and circumpolar conservation policies and programs, and to provide for timely and cost-effective information sharing. The CBMP is focused on monitoring and associated research, and will partly fulfill broader policy goals and management needs. There will be a particular focus on the effects of climate change, drawing on the results and recommendations of international and regional climatic assessments, such as the Arctic Climate Impact Assessment (ACIA). The CBMP program will also be coordinated with other AC programs, such as the Arctic Monitoring Assessment Program (AMAP). Further to that the CBMP hopes to work with relevant EU, European, North American and other regional monitoring programs and initiatives, as well as global ones.

Birds of Arctic Conservation Concern (BACC)

CAFF's Circumpolar Seabird Group (CBIRD) has recently initiated the BACC project to identify the status, trends, migration and wintering areas, and conservation issues of birds that breed in the Arctic but winter outside the Arctic. This project will describe the regular breeding migratory bird resources of each of the eight Arctic countries, and document which species are of country concern. It will also document each country's international bird programs and activities, and review their formal and informal international instruments to coordinate migratory bird conservation activities within international migratory bird flyways or otherwise outside a country's legal jurisdiction. Each instrument's effectiveness will be evaluated in terms of (1) meeting international communication, coordination, and collaboration needs; and (2) existence of, and participation in, action plans or strategies developed under the auspices of the

instruments. Lastly, the project will determine those species that are considered “Birds of Arctic Conservation Concern”.

The shared bird populations of species that breed in the Arctic but winter in or migrate through the European Union make this BACC project an outstanding example of potential cooperation between the Arctic Council and the European Commission.

Strategic Plan for the Protection of the Marine Environment

The Arctic Council Strategic Plan for the Protection of the Marine Environment, launched by Ministers one year ago, is based on an integrated approach to sustainable ocean management and is also intended to contribute to the fulfillment of the targets set by the World Summit on Sustainable Development.

A three-day workshop was held in October 2003 in order to exchange information and ideas on the drivers of change and trends in ocean management. The main drivers of change identified by the workshop include climate change and increased economic activity. There was broad consensus that the ecosystem approach should be central to the Arctic marine strategy. In addition, the precautionary approach and polluter pays principle were referred to as important elements for consideration.

The aim of the Arctic strategic plan is to develop and link existing principles. The strategy should offer numerous opportunities. It should help the Arctic Council confront existing conditions, including pollution, and will provide a means to address new and emerging challenges. One example is the possible opening of new Arctic sea routes, due to melting sea ice.

The plan should enable the Arctic Council to take a leading role in the regional application of the ecosystem approach. An integrated approach would include partnerships with external partners and provide links to other international initiatives, such as the EU Marine Strategy, the UNEP Regional Seas Program and the London Convention. The European Commission’s contribution to this important work would be highly appreciated.