



Nordic Council of Ministers' Arctic Co-operation Programme

Action Plan 2007

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Nordic co-operation

Nordic cooperation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and three autonomous areas: the Faroe Islands, Greenland, and Åland.

Nordic cooperation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic cooperation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

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Introduction

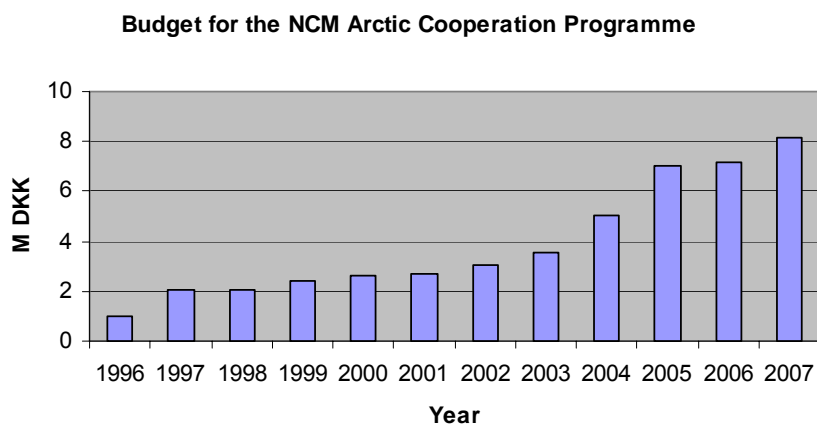
The Nordic Council of Ministers' Arctic Co-operation Programme provides the overall framework for the Council of Ministers' activities in the Arctic. Over and above the activities financed by the Arctic Co-operation Programme the Council of Ministers implements a considerable number of ventures in the Arctic which are carried out in co-operation with – or independent of – the individual councils of ministers within the Nordic Council of Ministers.

The Nordic Council of Ministers' Arctic Co-operation Programme dates back to 1996 and consists of 3-yearly programmes. The current co-operation programme is in effect for the period 2006–08. The programme defines the framework for the activities in the Arctic for which there is a common Nordic desire for priority and funding. In addition the Arctic Co-operation Programme is used by the Nordic Council of Ministers in co-operation with countries in the Arctic Council and the EU in relation to work in the Barents Euro-Arctic Council. The Arctic Co-operation Programme also supplements the Council of Ministers' Russian Programme which covers some of the same geographical area.

Under the current 3-year Arctic Co-operation Programme the Nordic Council of Ministers has chosen to focus on the following three main areas, namely:

- promotion of the indigenous peoples' living conditions and economic and cultural opportunities
- promotion of the preconditions for Nordic research with special reference to the International Polar Year 2007–2008 and
- promotion of Nordic co-operation on climate change in the Arctic and prevention of the dissemination of environmental toxins and heavy metals in the Arctic.

The Arctic Co-operation Programme has had increasing influence over the years and has therefore been granted more funding. In 2007 the annual funding was about 8.3 million Danish kroner. The individual councils of ministers within the Nordic Council of Ministers expect that a similar amount of money will be granted for ventures in the Arctic in 2007.



Annual action plans are drawn up which account for how the Council of Ministers plans to use the annual budget as assigned to the Arctic Co-operation Programme. This Action Plan for 2007 covers the activities to be carried out in this financial year.

The Nordic Council of Ministers' Arctic Co-operation Programme is run in the form of open project applications submitted to the Council of Ministers' Secretariat. There is only one annual deadline which means that the Council of Ministers has an total overview of all applications and can choose the projects which best support the programme's goals and have the greatest Nordic Advantage.

To advise the Council of Ministers in assessing the Arctic applications and to ensure that the ventures supplement the Nordic countries' national efforts in the Arctic, the Nordic Council of Ministers has set up an Advisory Expert Committee. The Committee is made up of Nordic members of the Arctic Council and representatives from the autonomous territories. The Committee acts, however, in an advisory capacity and it is the Nordic Committee for Co-operation that makes the final decision on which activities will receive funding from the Arctic Co-operation Programme.

The Nordic Council of Ministers received 49 applications for funding from the Arctic Co-operation Programme in 2007. The budget for the Arctic Co-operation Programme was far from able to meet the many applications and the Council of Ministers chose to grant 22 applications which were considered to promote the programme's objectives best.

In addition to the above-mentioned applications which were granted, the Nordic Council of Ministers has decided to initiate an analysis of the EU's Arctic policy. The objective is to have an overview of the EU's policy areas which have an influence on the Arctic and to create an overview of the EU's political and administrative processes regarding Arctic issues. The analysis is expected to be completed in the spring of 2008. The result and recommendations are expected to be used at a conference on the Arctic which NCM is considering holding in the autumn of 2008.

It should be noted that the Nordic Council of Ministers has carried out an assessment of the NCM's overall Arctic co-operation in the three-year period 2003–2005 to illustrate the scope of the Arctic ventures and to

evaluate the results achieved. The period chosen for the assessment is that of the previous Arctic Co-operation Programme. The assessment, which was carried out in 2006, gives a positive picture of the Nordic efforts in the Arctic and those made in co-operation with the Arctic Council. There have been a number of constructive proposals for strengthening Arctic Co-operation as a result of the assessment and the Council of Ministers has chosen to take most of these recommendations on board. These will be implemented during the coming year and will help to raise the level of Nordic Co-operation in the Arctic.

Nikolaj Bock, Arctic Adviser
Copenhagen, 1 July 2007

Nordic Council of Ministers' Co-operation Programme for the Arctic 2006–08

1. Introduction

The Nordic Council of Ministers' Co-operation Programme for the Arctic 2006–08 follows up the decision taken by the Nordic Co-operation Ministers to make the Nordic Region an active part of regional co-operation in Northern Europe. The Arctic Co-operation Programme is one of several co-operation programmes established by the Nordic Council of Ministers to facilitate regional co-operation with neighbouring countries and organizations. The Nordic Council of Ministers is a suitable platform for the Nordic countries to influence and position themselves favourably in relation to the political agenda for regional co-operation.

The Nordic Council of Ministers' Co-operation Programme for the Arctic dates back to 1996, and was most recently revised in 2002. The present revision is motivated by the fact that the programming period is coming to an end, but also by:

- Experience gained in the past years in connection with activities within the Arctic Council.
- Changes in the activities in the Adjacent Areas Programme having led to the establishment of a programme for Russia, and a geographically all-inclusive policy for co-operation with the neighbours of the Nordic Region.
- The revised Nordic Strategy for Sustainable Development which is one of the pillars of modern Nordic Council of Ministers co-operation and a basis for joint Nordic initiatives in the field of sustainable development.

The present co-operation programme will be the Nordic Council of Ministers' platform for co-operation on Arctic Issues with the member states of the Arctic Council, with the EU on the development of the Arctic Window in the EU Northern Dimension, and with the Nordic countries' Arctic neighbours in the West Nordic Area during the period 2006–08.

The Co-operation Programme for the Arctic will, amongst other things, supplement the Russia Programme; this programme will include Arctic issues pertaining to the geographical area falling under this pro-

gramme; equally the overall principles will be applied to activities under the auspices of the Barents Council and the Barents Regional Council.

The Co-operation Programme for the Arctic for 2006–2008 is aimed at complementing the actions of the Nordic countries in the Arctic Council and joint Nordic initiatives under the auspices of the International Polar Year (IPY) 2007–2008, thus forming the point of departure for co-operation between the Council of Ministers and the Arctic Council. Normally, initiatives and activities must be initiated by or within the Arctic Council. However, other initiatives may become relevant. Any activity in which the Nordic Council of Ministers participates must be in keeping with the overall strategies of the Nordic Council of Ministers and the Nordic countries.

The Co-operation Programme for the Arctic includes all the Nordic Council of Ministers' activities in the Arctic. It is partly financed by the respective councils of ministers within the Nordic Council of Ministers, partly by a special overall budget line under the Council of Ministers for Co-operation. The purpose of the latter is to carry out activities in the Arctic, e.g. through co-financing with the individual councils of ministers or other actors.

2. The Nordic Council of Ministers political objectives in Arctic Co-operation

The overall objective for Nordic co-operation concerning Arctic issues is to be used as guidance with regard to planning and implementing the co-operation activities carried out by the Nordic Council of Ministers in the Arctic area. Special importance is attached to the following aspects:

- Developing and improving the quality of life for the population and the ecological and economic preconditions for continued habitation in the Arctic area with a special responsibility vis-à-vis the situation of the Sami and Inuit population.
- Contributing towards and supporting the social and cultural development of the Arctic population taking into consideration the challenges posed by increasing globalisation, and fostering a better understanding of multilateral and international processes.
- Contributing towards the protection the Arctic nature, the quality aspects of nature and biological diversity and ensuring sustainable use of the region's resources in terms of renewable and non-renewable resources.
- Following up on the basis of existing knowledge of environmental toxins, heavy metals and climate change and their consequences for human and animal life.

In policy terms, importance is attached to the continuing development of rational methods and forums for co-operation between the Arctic states with a view to mutual and communal responsibility for implementing the projects necessary for realising the overall objectives of the co-operation.

3. The Council of Ministers' Activities concerning Arctic Issues 2006–08

Within the overall framework described above, particular focus will be directed at three main areas during the period 2006–08, namely:

- Promoting the living conditions of indigenous peoples and their opportunity to improve their economic and cultural conditions, inter alia, by following up on the Arctic Council's Arctic Human Development Report.
- Improving the conditions for Nordic research with a special view to the International Polar Year 2007–2008.
- Improving the conditions for Nordic co-operation on climate change in the Arctic, including following up the Arctic Climate Impact Assessment of the Arctic Council, and pursuing initiatives aimed at preventing the proliferation of environmental toxins and heavy metals in the Arctic.

4. The Council of Ministers' Specific Activities concerning Arctic Issues

The present Co-operation Programme for the Arctic applies to all aspects of the Nordic Council of Ministers activities in the Arctic. The overall framework is expected to be complemented and supported through work and activities in the individual councils of ministers within the Nordic Council of Ministers, and may encompass the following:

- *Sustainable use of resources* Because of the vulnerable environmental conditions in the Arctic, sustainable use of resources plays a central role in Arctic co-operation. The Council of Ministers will continue to give priority to activities which promote sustainable development within the auspices of the Arctic Council.
- *Strengthening networks and competences with regard to participation in international democratic processes* The Council of Ministers will give priority to competence development of indigenous peoples in connection with local and regional administration as well as participation in international processes. In particular, priority will be given to

establishing networks between women's organizations, and to women's situation and revenue potential in the Arctic area.

- *Health and welfare* The Council of Ministers will continue co-operating on promoting health issues, including, in particular, combating communicable diseases. Long term development activities aimed at defining indicators for the living conditions of the Arctic populations own terms will be pursued.
- *Protection of nature and combating pollution* The Strategy for Sustainable Development 2005–08 and the Nordic Environmental Action Plan 2005–08, including the strategy for the Arctic focusing on environmental toxins, heavy metals, and climate change, form the framework for the Council of Ministers' environmental protection activities in the Arctic.
- *Follow-up on climate change in political and practical terms* Priority will be given to following up on the 'ACIA Policy Document' of the Arctic Council including the emission limits, adaptation, research and the dissemination of information. The climate study ACIA should be elaborated by means of new scenarios, sub-regional studies as well as by an identification of the most vulnerable social sectors, ecosystems, and health situations.
- *Co-operation on business development in sparsely populated areas* This includes the development of the service and the culture sectors as well as local production and processing. The Council of Ministers will give priority to activities which increase the economic development in sparsely populated areas and continue co-operation on competence building. This relates partly to processing products originating from the primary sector, partly to modern products which can be developed on the basis of existing economic activities, including sustainable tourism.
- *Alternative energy supply in the Arctic* Special attention will be paid to decentralized solutions that can be connected to supply systems outside the central supply grid, including decentralised renewable energy systems and storage technologies, which potentially can be of significant impact.
- *Research* The Council of Ministers considers it important to maintain the existing research focus in the Arctic area, in particular those originating from Arctic universities. The Nordic Research Board is called upon to pay special attention to the interests of the Nordic countries in joint Nordic research projects within the framework of IPY 2007–2008. The Council of Ministers will give priority to assisting networks between Arctic education, training, and research institutions.
- *Culture* Cultural cross-border interactions have long traditions in the Arctic areas of the Nordic Region. These traditions will be continued, strengthened and taken into consideration in connection with cultural activities taking place under the auspices of the Barents co-operation.

- *Education and ICT* The Council of Ministers possesses special insight into the field of co-operation between institutions of higher education in the Nordic Region. Nordic university co-operation can be used as a model for developing co-operation and for virtual types of education under the auspices of the University of the Arctic, a network of institutions of higher education in the Arctic area. Activities under the Information and Communication Technology of the Arctic Council will be given priority, including Internet-based distance learning and tele-medicine.

5. Co-operation Instruments

Specific projects under the Co-operation Programme for the Arctic will be implemented, partly as individual projects on the basis of applications made by countries and organisations or institutions in the Nordic Region, and partly as initiatives reflecting the need of the individual sectors to support existing political processes, for example through the Arctic Council.

- *Co-operation projects* The Council of Ministers will give priority to projects of joint Nordic interest and in cases where co-operation will reinforce the Nordic political profile and where Nordic views will create added value, in particular within the framework of the Circumpolar Co-operation of the Arctic Council.
- *Co-financing* The co-financing of projects will be possible, and will include financing of Nordic participation in co-operation projects in the Arctic. Special importance is attached to developing new ideas for Arctic co-operation projects. The Council of Ministers may contribute financially to activities in the standing working groups, ad hoc groups and instruments of the Arctic Council, including the Arctic Council's 'Action Plan to Eliminate Pollution of the Arctic' (ACAP).
- *Mobility Programme* In the Arctic area, grant schemes are supported which enable students and researchers to participate in university co-operation in the Arctic area. The grant scheme takes advantage of experiences obtained through other grant schemes and mobility programmes in the Council of Ministers. Special importance will be attached to the existing exchange programmes of the Nordic Council of Ministers, and should, amongst others, include government officials, parliamentarians, journalists, business people, artists, craftsmen and women, schools, etc.
- *Dissemination of results, information and contact activities and establishing networks* The Council of Ministers participates in the activities of the Arctic Council in the capacity of permanent observer and disseminates information via the website. To the highest possible de-

gree, the existing Nordic institutional structure will be used for contact activities.

6. Organization of Co-operation

A review of the Co-operation Programme for the Arctic 2006–2008 is envisaged for 2008. All aspects of the Nordic Council of Ministers' activities will be reviewed.

The Arctic Advisory Board will continue to act as the Expert Committee, and the committee consists of the Senior Arctic Officials and representatives of the Faeroe Islands and Greenland. The Arctic Advisory Board plays an advisory role with regard to the design, implementation and follow-up of the Nordic Council of Ministers' Arctic activities. The Arctic Advisory Board may invite ICC Greenland and the Sami Council to participate in the work in correspondence with the Council of Ministers' guidelines for co-operation with NGOs.

The Nordic Council of Ministers Secretariat manages the secretarial functions of the Arctic Advisory Board

Nordic Council of Ministers' Arctic Activities in 2007

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Project name	Period	Applied (K DKK)	NCM grant (K DKK)
Main area 1 – Indigenous peoples and economic development			
Arctic Social indicators (ACI) Project	2006–2008	372	370
CMBP EALÁT Information	2007–2008	644	400
AMAP – Relation between lifestyle, local pollution and the human health of Arctic indigenous peoples	2005–2007	500	500
Integration of selective breeding and culling in reindeer production	2007–2009	508	450
The political economy of Northern regional development	2007–2008	500	400
Arctic Regional Workshop "Indigenous peoples territories, lands and natural resources"	2007	300	150
		2.824	2.270
Main area II – Research in relation to IPY			
Circumpolar Social Changes: Opportunities and Challenges for Social Sciences in the International Polar Year 2007–2008	2006–2008	431	430
Trans North Atlantic Sighting Survey – TNASS	2006–2008	973	128
The Arctic Hydrological Cycle Monitoring, Modelling and Assessment Program – Arctic-HYDRA	2006–2009	571	400
Joint Nordic information on arctic health during the International Polar Year – IJC theme supplements	2007–2008	137	100
ASCOS – The IPY Arctic Summer Cloud Ocean Study	2007–2009	507	500
Enhancing IPY Studies on Climate and Pollution in the Arctic by Nordic Researchers (CLEAN)	2007–2008	654	600
Nordic CAVIAR – Community Adaptation and Vulnerability in the Arctic Regions	2007–2009	325	300
Arctic-Atlantic Exchanges (ARATEX)	2007–2009	500	500
		4.098	2.958
Main area III – Environment and climate			
BalticSeaBird International Conference	2007	65	65
AMAP – Funding for AMAP's work with reports of oil and gas in the Arctic to be presented at a ministerial meeting in the Arctic Council	2002–2007	400	400
AMAP – Effect of climate change on transport, levels and effects of contaminants in Northern areas	2005–2009	800	400
KINNVIKA: Change and Variability of the Arctic System – Nordaustlandet, Svalbard	2006–2009	750	500
The Freshwater budget of the Nordic Seas (FreshNor)	2007–2009	335	300
Collection, cultivation and utilization of Greenlandic grasses and medicinal plants for use in the Arctic	2006–2008	280	280
Global Change Impact on sub-arctic tundra mires and greenhouse gas feedbacks to the climate system (PALSALARM)	2007–2008	502	500
		3.132	2.445
Other Arctic			
UARctic Thematic Network on Global Change in the Arctic	2006–2008	500	400
An Arctic Interactive Mapping Portal – a subproject of the arctic Portal	2006–2009	500	300
		1.000	700
Administration			
Administration (101 K DKK have been carried over from 2006 from administration)			0
Seminars/co-operation projects			100
Co-operation programme budget: K DKK 8.338 (+135 K DKK carried over 2006)			8.473

Project name: Arctic Social indicators (ACI) Project

Objectives:	Compilation of indicators for human development in the Arctic. <i>Expected result:</i> A set of social indicators for the Arctic. Indicators which reflect important aspects of human development in the Arctic, and which could be a link in the development and construction of a system whose chief purpose is to follow changes in human and social development in the future. The results will be published on the internet and in print. <i>How will the results be disseminated?</i> Through the media, conferences, seminars, educational institutions, publication in books, reports, internet dissemination, Arctic Council, Sustainable Development Working Group (SDWG) website, Arctic Portal website.
Activities:	Compilation of a report on indicators for human development in the Arctic. Development of indicators for human development in the Arctic. Work group workshops.
Target group:	Decision-makers, researchers, inhabitants of the Arctic, educational institutions, University of the Arctic, Arctic Council.
Participating Nordic countries:	Iceland, Denmark, Greenland, Norway, Sweden, Finland.
Participating countries in the Arctic:	Iceland, Denmark, Greenland, Norway, Sweden, Finland, Russia, USA, Canada.
Co-operation partners:	SliCA, Political Economy of Northern Regional Development, ArcticStat, UNDP, IASOS.
Total budget:	1,535,000 DKK
Arctic funds in 2007:	370,000 DKK
External funds:	150,000 DKK
Responsible sector in NCM:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Stefansson Arctic Institute, Akureyri, Iceland.
Duration of project:	2006–2008.

Project name: CMBP EALÁT Information

Objectives:	<p>Over 20 Arctic indigenous peoples who make their living from reindeer husbandry face major challenges linked to changes in society and the climate in the north. There is an urgent need to inform the Arctic nations about these changes, and to show some concrete examples of how reindeer herders' traditional knowledge is connected to adjustment to change, including traditional use of grazing land.</p> <p>Partnership between Russian and Sami reindeer husbandmen in such an information project is an important and new contribution to achieve this. A major challenge for the project is to use the reindeer herders' knowledge to contribute to sustainable development in the Arctic, and, in particular, to involve the reindeer husbandmen from Fennoscandia and Russia in this process.</p> <p><i>Expected result:</i></p> <p>To bring forth and communicate some simple, concrete examples of how reindeer husbandry's traditional knowledge is linked to adjustment to climate change and change of use of the Arctic.</p> <p>To promote local development of expertise for the Arctic peoples.</p> <p><i>How will the results be disseminated?</i></p> <p>The aim is to present the results to the Arctic Council, for example, at the ministerial meeting in 2009. The results will also be made available in reports and in a web-based presentation, to be communicated to reindeer herders and the reindeer husbandry society, research and educational environments, national authorities and political co-operation bodies in the Nordic Region and the rest of the Arctic. It is intended to communicate through the following channels:</p> <p>Arctic Council Reindeer husbandry organisations, both national and international International Polar Year University of the Arctic International Action on Global Warming (IGLO) Media</p>
Activities:	<p>Local and case-based workshops in reindeer husbandry communities in the most important reindeer areas will focus on information on how to use traditional knowledge and how traditional grazing lands are being lost. SDWG EALÁT Information will communicate the results of these community-based gatherings to, for example, the Arctic Council, including both Senior Arctic Officials (SAOs) and attendance at the ministerial meeting in Norway in 2009. The project will promote local development of expertise for the Arctic peoples.</p>
Target group:	<p>Target groups for communication of the project's results are, amongst others, reindeer herders and their organisations, the Arctic Council including sub groups, educational institutions, national authorities and political co-operation bodies in the Arctic.</p>
Participating Nordic countries:	Norway, Sweden and Finland
Participating countries in the Arctic:	Russia
Co-operation partners:	<p>The Abisko Scientific Research Station, Sweden Arctic Centre, University of Lapland, Finland Association of World Reindeer Herders (WRH) Meteorological Institute Reindeer Herders' Union of Russia (RHUR) Sami Council Sami University College / NSI Sami Reindeer Herders' Association, Finland The National Union of the Swedish Sami People UNEP/ GRID-Arendal</p>
Total budget:	3,144,000 DKK
Arctic funds in 2007:	400,000 DKK
Responsible sector in NCM:	Agriculture, Adviser Lise Lykke Steffensen, lls@norden.org
Administrative body:	International Centre for Reindeer Husbandry
Duration of project:	2007–2009

Project name: AMAP - Relation between lifestyle, local pollution and the human health of Arctic indigenous peoples

Objectives:	Survey of the connection between lifestyle and different types of pollution found in the locality and the state of health of indigenous peoples. <i>Expected result:</i> A better clarification of the relationship between lifestyle, diet and local and global pollution in the Arctic indigenous peoples. <i>How will the results be disseminated?</i> Several scientific reports will be published. The results will be used in AMAP's new report on the state of health in the Arctic which will be presented at the ministerial meeting in the spring of 2009.
Activities:	Data collection from the environment concerning levels of contaminants in nature, water and traditional food. Collection of health data and lifestyle information. Analysis of collected data.
Target group:	Ministers, decision makers, researchers and the indigenous peoples in the Arctic area, international bodies and registers.
Participating Nordic countries:	Denmark/Faroe Islands/Greenland, Finland, Norway, Sweden, Iceland.
Participating countries in the Arctic:	Russia, Canada.
Co-operation partners:	Jens C. Hansen, Pal Weihe, Kristin Olafsdottir, Jon Ø. Odland, Valery Chashchin, Andy Gilman, Cynthis de Wit, et al.
Total budget:	3,500,000 DKK
Arctic funds in 2007:	500,000 DKK
Responsible sector in NCM:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	AMAP Secretariat
Duration of project:	2005–2007.

Project name: Integration of selective breeding and culling in reindeer production

Objectives:	<p>Develop the scientific bases for integration of selective breeding and culling in reindeer production systems, in particular 1) exploring the long-term scopes for selection and culling based on ecological, economical and management related considerations, 2) development of selection criteria and tools which need to be flexible in order to cover a wide spectrum of conditions in Fennoscandia, and 3) development of selection and culling strategies suitable for integration with the reindeer production system.</p> <p><i>Expected result:</i> Theoretical basis, strategies and tools for implementation of selective breeding and culling in the reindeer production system. This will provide an option for improved economic sustainability of reindeer industry. Thereby the general sustainability of traditional land use in Northern areas, and the Sami use and culture in particular, is strengthened.</p> <p><i>How will the results be disseminated?</i> The results will be disseminated through seminars and written popular material about the development results directly and via the industry organizations to the industry. Tools will be provided freely to herding communities and enterprises. We will likely also get help from herding communities which already have practiced selective breeding in Sweden and Norway. Finland has not yet applied this but has shown great interest in becoming involved in this project.</p>
Activities:	1) Establishment of selection objectives; 2) Development of selection and culling criteria, 3) Evaluation of alternative selection and culling strategies; 4) Development of tools and protocols for practical application.
Target group:	Reindeer industry and industry organisations in the Nordic countries.
Participating Nordic countries:	Sweden, Finland and Norway.
Participating countries in the Arctic:	
Co-operation partners:	Reindeer husbandry unit, SLU, Sweden (Prof Öje Danell); MTT Agrifood Research, Finland (Prof Asko Mäki-Tanila); Dept of Animal and Aquacultural Sciences, Norwegian University of Life Sciences (Ass Prof Øystein Holand); Reindeer Research Station, Finnish Game and Fisheries Research Institute (Ass Prof Mauri Nieminen); Ruvhten Sijte Reindeer Herding Community, Sweden; Rias/Hylling Reindeer Herding District, Norway; Kutuharju Reindeer Research Flock, Association of Reindeer Herding Co-operatives, Kaamanen; National Association of Swedish Sami (owner of current computer software to be further developed for all countries).
Total budget:	2,798,000 DKK
Arctic funds in 2007:	450,000 DKK
Responsible sector in NCM:	Agriculture, Adviser Lise Lykke Steffensen, lls@norden.org
Administrative body:	Swedish University of Agricultural Sciences (SLU) PO Box 7023, S-750 07 Uppsala.
Duration of project:	2007–2009

Project name: The political economy of Northern regional development

Objectives:	To carry out an analysis of regional development in the Arctic. The Project aims at analysis of the Arctic economies' ability to promote a self-sufficient development path. There are four approaches to analysis of the research question regarding the Arctic regional economies' ability to create economic independence. First the impact of globalisation, second the systemic impact, third the climate impact and fourth impacts of a local character in each region. <i>Expected result:</i> Distribution of yearbook after workshops, distribution of summary report/book, articles in journals and dissemination to the general public. <i>How will the results be disseminated?</i> Through the mass media and professional channels.
Activities:	Workshops followed by publications.
Target group:	Colleagues, native decision makers in the Arctic regions.
Participating Nordic countries:	Greenland, Iceland, Faroe Islands, Denmark, Norway and Finland.
Participating countries in the Arctic:	USA, Canada and Russia.
Co-operation partners:	<i>Hans Aage</i> (Denmark): Economics and Sociology, Transformation Economics and Comparative Systems, the Russian Economy, the Greenland Economy. <i>Knut Alfsen</i> (Norway): Statistics, the 'ARCTICSTAT' database. <i>Vladimir Didyk</i> (Russia): Political economy, Development in Northern Russia. <i>Gerard Duhaime</i> (Quebec, Canada): Sociology, Self-government, Land Claims, Northern Communities of Canada, ARCTICSTAT database. <i>Solveig Glomsrød</i> (Norway): Statistics, Resource Economics, ECONORD. <i>Lee Husky</i> (USA): Economics, Migration of Arctic Communities. <i>Joan Nyman Larsen</i> (Iceland): Economics and Statistics, the Economy of Greenland, Northern economies. <i>Larissa Riabova</i> (Russia): Political Economy, local Community Development. <i>Ivar Jonsson</i> (Iceland): Economics of Innovations, Organizational Dependency and the economy of Greenland. <i>Jack Kruse</i> (USA): Living conditions and Economy of Alaska. <i>Ilmo Maenpaa</i> (Finland): Statistics on Northern Finland, ARCTICSTAT. <i>Jogvan Mørkøre</i> (The Faroe Islands): The Faroese society, resource economics. <i>Birger Poppel</i> (Greenland): Living Conditions in the Arctic, Greenland, the SLICA database <i>Chris Southcott</i> (Ontario, Canada): Rural Sociology, Northern Development, Urbanization. Gorm Winther (Denmark): Economics, Economy of Greenland and the Arctic, Comparative Systems Analysis. Furthermore the project forms part of a co-operation with Joan Nyman Larsen on Arctic Social Indicators. The project is co-financed by the NCM's Arctic Co-operation Programme. A workshop will be held in Roskilde at the beginning of June this year, when the project will be launched. The workshop for the project is planned to take place in the autumn of this year.
Total budget:	900,000 DKK In 2007, covering the period 1/1/2008 to 1/1/2010, application has been made for total funding of about 6 million DKK. (The application includes 2 PhD students, a professor's salary, secretarial help, expenses for workshops, publications and administrative costs and institution subsidies).
Arctic funds in 2007:	400,000 DKK
Responsible sector in NCM:	Finance, Adviser Ola Yndeheim, oy@norden.org
Administrative body:	Department of History, International and Social Studies, Aalborg University, Fibigerstræde 2, 9220 Aalborg Ø.
Duration of project:	1/4 2007 – 1/1 2010

Project name: Arctic Regional Workshop on "Indigenous peoples' territories, lands and natural resources"

Objectives:	<p>The aim of the workshop is to be an important part of the regional preparatory process for the forthcoming discussions related to indigenous lands, territories and natural resources in the United Nations Permanent Forum on Indigenous Issues, to be held in May 2007.</p> <p><i>Expected result:</i></p> <p>It is expected that the workshop will identify the main challenges and problems faced by Arctic indigenous peoples as far as recognition of their rights to lands and natural resources is concerned. In other words, to identify the challenges which indigenous peoples are facing in their effort to secure their future as distinct peoples, within existing states.</p> <p>Moreover, it is expected that the workshop will produce specific conclusions and recommendations on possible solutions for some of the present challenges related to indigenous peoples' land and resource rights, in particular with regard to possible solutions to conflicts between indigenous peoples' rights and competing needs and interests in relation to the usage of traditional indigenous lands and their resources. Finally, it should be expected that the workshop will be able to articulate concrete recommendations to the United Nations Permanent Forum concerning its future work and undertakings in relation to the issue of indigenous peoples' territories, lands and natural resources.</p> <p>It is also believed that the workshop will be a contribution towards meeting some of the main objectives of the Second International Decade of the World's Indigenous Peoples, in particular the objective of "promoting full and effective participation of indigenous peoples in decisions which directly or indirectly affect their lifestyles, traditional lands and territories, their cultural integrity as indigenous peoples with collective rights or any other aspect of their lives, considering the principle of free, prior and informed consent."</p> <p><i>How will the results be disseminated?</i></p> <p>A report will be distributed widely within UN system organisations, states, indigenous peoples' organisations and representative bodies. A report will be published on the website of UN Permanent Forum on Indigenous Issues.</p>
Activities:	Workshop.
Target group:	States, indigenous representative bodies, indigenous non-governmental organizations.
Participating Nordic countries:	Denmark, Norway, Finland and Sweden.
Participating countries in the Arctic:	Denmark, Norway, Finland and Sweden.
Co-operation partners:	Sami Parliamentary Council, Inuit Circumpolar Council, Sami Council.
Total budget:	300,000 DKK
Arctic funds in 2007:	150,000 DKK
External funds:	150,000 DKK
Responsible sector in NCM:	Regional, Adviser Helena Wallin, hw@norden.org
Administrative body:	Sami Parliament in Finland.
Duration of project:	26–27.3. 2007

Project name: Circumpolar Social Changes: Opportunities and Challenges for Social Sciences in the International Polar Year 2007–2008

Objectives:	<p>To hold ICASS VI with the participation of 3–400 researchers, indigenous peoples of the Arctic and other interested parties in order to consolidate existing research networks and to establish new professional relationships between social scientists and other researchers within and outside of the Arctic.</p> <p><i>Expected result:</i> As one of the largest unifying events to take place in the International Polar Year ICASS VI is expected to be a interdisciplinary and international forum for the presentation of research findings and the boosting and establishment of research co-operation within the sphere of social research in the Arctic.</p> <p><i>How will the results be disseminated?</i> Public lectures are expected to be held in conjunction with the actual conference. After the conference all the keynote speeches will be published in the series 'Topics in Arctic Social Sciences', a publication which IASSA distributes to all its members, relevant research institutions, funds and research councils. Moreover, the publication can be ordered free of charge by all interested parties by contacting the IASSA Secretariat.</p> <p>It is also expected that the conference's wide spectrum of participants will encourage dialogue between researchers and the local communities in the Arctic, and thus indirectly promote research presentation directly to politicians and citizens in the individual communities.</p>
Activities:	<p>Funds sought for: Improvement of ICASS VI through</p> <p>I) Employment of a part-time member of secretariat staff</p> <p>II) Holding of conference preparatory workshop/symposium for IASSA's board and IASSA's IPY liaison team et al.</p>
Target group:	Social researchers within and outside the Arctic, indigenous peoples in the Arctic and others with an interest in the social issues in relation to the Arctic areas in general.
Participating Nordic countries:	Greenland, Sweden, Denmark, Norway, Iceland, Finland.
Participating countries in the Arctic:	Greenland, Iceland, Norway, Finland, Russia, Sweden.
Co-operation partners:	<p>IASSA's board (9 members from 6 different research institutions within and outside the Arctic)</p> <p>National Science Foundation</p> <p>Greenland's Home Government</p> <p>Ilisimatusarfik, University of Greenland.</p>
Total budget:	431,530 DKK
Arctic funds in 2007:	430,000 DKK
Responsible sector in NCM:	Health, Adviser Maria-Pia de Palo, mpp@norden.org
Administrative body:	IASSA (International Arctic Social Sciences Association).
Duration of project:	2006–2008 (conference to be held 25–29 August 2008)

Project name: Trans North Atlantic Sighting Survey – TNASS

Objectives:	<p>TNASS aims at estimating the summer distribution and absolute abundance of cetacean populations in the North Atlantic between approximately 40°N to 80°N and between Norway and Canada.</p> <p><i>Expected result:</i></p> <p>TNASS aims at estimating the summer distribution and absolute abundance of cetacean populations in the North Atlantic between approximately 40°N to 80°N and between Norway and Canada. The synoptic trans-Atlantic overview over the largest area ever covered by a co-ordinated survey (over 1,600,000 nm²) will represent a considerable enhancement of our understanding of cetacean populations in the North Atlantic, and especially its Arctic part.</p> <p><i>How will the results be disseminated?</i></p> <p>In addition to the production of scientific reports, articles and conference presentations, TNASS includes a plan for dissemination to the general public, with a website active during the survey, the distribution of a non technical report, press releases and a possible documentary film.</p> <p>For more information see on www.nammco.no</p>
Activities:	TNASS aims at estimating the summer distribution and absolute abundance of cetacean populations in the North Atlantic between approximately 40°N to 80°N and between Norway and Canada.
Target group:	Scientists, managers (fisheries and whaling) and politicians.
Participating Nordic countries:	Norway, Iceland, Faeroe Islands, Greenland.
Participating countries in the Arctic:	Russia
Co-operation partners:	
Total budget:	34,464,000 DKK
Arctic funds in 2007:	128.000 DKK from the Arctic Co-operation Programme 2007
External funds:	34,336,000 DKK
Responsible sector in NCM:	<p>Nordic Steering Group for the Environment and Fisheries (MiFi).</p> <p>Andreas Stokseth; Tel + 47 22 24 65 28</p> <p>E-mail: Andreas.stokseth@fkd.dep.no</p> <p>Fisheries, Adviser Ásmundur Guðjónsson, ag@norden.org</p>
Duration of project:	The project will run for 31 months from 2006–2008. The abundance survey will be conducted around July 2007.

Project name: The Arctic Hydrological Cycle Monitoring, Modelling and Assessment Program – Arctic-HYDRA

Objectives:	<p>The Arctic-HYDRA project consists of a core network for the observation of the Arctic Hydrological Cycle, AHC, based on the hydrological networks of the National Hydrological Services of the Arctic countries coupled with focused process studies. Hydrological models and data assimilation techniques will be developed to generate an integrated description of the AHC and an assessment of the freshwater inflow to the Arctic Ocean and the potential feedbacks between the atmosphere, cryosphere and the oceans. The Arctic-HYDRA (#104) is endorsed by the JC of IPY.</p> <p><i>Deliverables</i> A Pan-Arctic network of Hydrological Services, government agencies and research and educational institutes under Nordic leadership that functions well, with clear Nordic impacts on the direction and content of the Arctic-HYDRA IPY project. The Arctic-HYDRA IPY project is seen as a stepping stone into the long term strategies of the Arctic Council as reflected in the results from the ICARPII meeting in Copenhagen in November 2005.</p> <p><i>Dissemination</i> A public outreach program, based on modern information technologies and methodologies, to disseminate information about the output of Arctic-HYDRA IPY project and related projects e.g., the Nordic project on Climate and Energy. This will make important information on the variability and change in the Arctic environment accessible and understandable to the public, policy makers and the educational and scientific community. Creation of a Nordic forum to disseminate comprehensive results from the IPY program, both as presentations and publications via session at the international conferences Climate and Water held in Helsinki in September 2007 and an international Workshop on Arctic-Hydrology co-convened with the Nordic Association for Hydrology, WMO and UNESCO-IHP in 2008 and at other forums that are suited for dissemination.</p>
Activities:	<p>To establish a network of the Arctic countries to develop and implement the Arctic-HYDRA;</p> <p>To develop and manage a web page for the management, information dissemination and meta-data for the Arctic-HYDRA IPY project;</p> <p>To develop and manage a web-based Geographical Information System to disseminate information and research results generated from within the IPY and other National and Nordic Projects e.g., Climate and Energy, CE, to the general public, policy makers and the educational system based on a modern information technology platform for systematic public outreach;</p> <p>To plan, organize and manage a workshop on Arctic-Hydrology as a part of the Nordic Hydrological Conference to be held in Iceland in 2008.</p>
Target group:	<p>The Arctic and international science community interested in Arctic questions where knowledge of the Arctic Hydrological Cycle is relevant. Decision makers concerned with the role of the Arctic in Global changes and the feedback from Global changes on the Arctic environment. Professionals in water management and environmental issues related to water.</p>
Participating Nordic countries:	Greenland, Denmark, Finland, Iceland, Norway and Sweden.
Participating countries in the Arctic:	The Russian Federation, Canada, USA Other countries: Japan and Germany
Co-operation Partners:	J. Zakrevski, Canada, B. Hasholt, Denmark, M. Puupponen, Finland, C. Helweg, Greenland, R. Engeset, Norway, V. Vuglinski, Russian Federation, S. A. Frenzel, USA, R. Lammers, USA, A. Shiklomanov, USA, C. Vorosmarty, USA, J. Curry, USA, D. Kane, USA, T. Ohata, Japan, J. Pomeroy, Canada, T. Prowse, ICARPII, W. Grabs, WMO, V. Ryabinin, WMO, T. Maurer, Germany
Total budget:	4,733,298 DKK
Arctic funds in 2007:	400,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Hydrological Service, National Energy Authority, Iceland.
Duration of project:	2006–2009.

Project name: Joint Nordic information on Arctic health during the International Polar Year – IJC theme supplements

Objectives:	<p>Overall objective: is to promote networking, research and the production of new joint Nordic information in Arctic health by bringing together Nordic universities and other research organisations for sharing information and producing material that could not be realized by individual institutions on their own. This material would consist of health aspects relevant and specific to the Northern areas, and Nordic countries.</p> <p><i>Specific objectives:</i> to collect information of Sami health and wellbeing in the Nordic countries and adjacent areas for producing a special issue; to produce a supplement issue in collaboration with the Russian project partner on health situation of the Northern indigenous populations.</p> <p><i>Expected result:</i> To plan, produce and publish one special issue "Sami health" in the International Journal of Circumpolar Health and one supplement issue "Health of Russian Northern indigenous populations" in the association's supplement series "Circumpolar Health Supplements".</p> <p><i>How will the results be disseminated?</i> The theme supplements will be distributed to the regular subscribers of the IJCH including scientists, health care professionals, health authorities and decision-makers in various circumpolar countries (Nordic countries, Canada, USA, Russia). Additional copies of the theme supplements will be distributed to selected relevant Nordic health care institutions, national health authorities, to the Nordic members of the European Parliament and to the WHO European Office. In addition to this, the electronic version/web of the IJCH enables dissemination of the produced information efficiently.</p>
Activities:	Promoting the collection and production of scientific and professional information for publication in special issue of the International Journal of Circumpolar Health (IJCH) and in supplement issue of association's supplement series "Circumpolar Health Supplements" to be launched within the International Polar Year activity.
Target group:	Nordic health care professionals, decision-makers and authorities of the health sector; Nordic health care institutions; Nordic health education; international subscribers of the IJCH, that is scientists, health care professionals, decision-makers, authorities.
Participating Nordic countries:	Finland, Sweden, Norway.
Participating countries in the Arctic:	Russia, Canada.
Co-operation partners:	Centre for Sami Health Research, University of Tromsø, Professor Eiliv Lund and Dr. Siv Kvernmo, Norway; Department of Public Health and Clinical Medicine, University of Umeå, Dr. Sven Hassler, Sweden; Arc-An laboratories, Dr. Andrev Kozlov, Russia; International Network of Circumpolar Health Research (INCHR), Professor Kue Young, Canada.
Total budget:	264,020 DKK
Arctic funds in 2007:	100,000 DKK
Sector funds:	74,500 DKK
External funds:	89,520 DKK
Responsible sector in NCM:	Health, Adviser Maria-Pia de Palo, mpp@norden.org
Administrative body:	International Association of Circumpolar Health Publishers (IACHP), Aapistie 1, FIN-90220 OULU, FINLAND, tel. +358 8 537 5648, fax +358 8 537 6203, email ijch@oulu.fi or juhani.hassi@oulu.fi ; web http://ijch.oulu.fi
Duration of project:	1.1.2007 – 31.12.2007

Project name: ASCOS – The Arctic Summer Cloud Ocean Study

- Objectives: ASCOS is a multi-month Arctic field experiment planned for the summer of 2008. With an integrated study from the sea-ice interface to the cloud-topped boundary layer, ASCOS will identify and understand controlling factors of the low-level cloud system over the Arctic pack ice (www.misu.su.se/~michaelt/ASCOS/ASCOS.html). A distinct feature of ASCOS is its necessarily interdisciplinary nature, which includes marine biochemistry, aerosol and cloud chemistry/physics, and meteorology. An ultimate aim of ASCOS is to incorporate the results in climate models to improve the reliability of Arctic climate change projections. The more specific scientific aims are:
- To determine the role of marine biochemical sources for CCN (Cloud Condensation Nuclei) and IN (Ice Nuclei) formation, with emphasis on the open lead surface microlayer.
 - To determine the evolution of CCN and IN, how they form cloud droplets and ice crystals and partition water between the liquid and solid phases.
 - To determine the role of boundary-layer clouds on the turbulent exchange of heat, momentum, gases and aerosols across the ocean/ice/air interface and with the free troposphere.
 - To provide data to test and implement reliable satellite algorithms for area-covering climate monitoring.
 - To provide a high-Arctic mirror-station of intense atmospheric measurements that for a limited time will sample data similar to monitoring stations around the rim of the Arctic Ocean, for example at Barrow and Alert/Eureka.
 - To provide a comprehensive data set as a part of IPY on the high Arctic climate system, for developing and testing of integrated climate models.

Expected result

There is no region on earth where the climate changes faster than it does in the Arctic. Yet the models projecting future climate are the most uncertain in this region (ACIA 2004). This paradox – that the models are the most uncertain where they are needed the most – is partly due to an inadequate understanding of several strong feedback mechanisms that are specific to the Arctic region. This in turn is explained by the fact that they are difficult to study and therefore largely unexplored.

Clouds play a particularly important role in the Arctic climate. They are the single most important factor determining the surface radiation budget, which is also recognized by the Working Groups (in particular WG 4 and 9) of the recent Second International Conference on Arctic Research Planning (ICARP II, 10-13 Nov 2005, Copenhagen, <http://www.icarp.dk/>). Arctic clouds are dominated by low-level boundary-layer clouds. Such clouds are at most other latitudes known to have a cooling effect on the surface due to their high reflectivity. This reflectivity is sensitive to the number of cloud droplets, which depends on the fraction of water-soluble aerosol particles, known as cloud condensation nuclei (CCN). In the Arctic, low-level clouds constitute a warming factor on climate. However, the mechanisms responsible for their formation, their macro and microphysical structure and removal mechanisms are very poorly known and understood.

Climate models used for future climate projections show large uncertainties, manifested as much larger model scatter than elsewhere. This scatter relates partly to an insufficient understanding of feedback mechanisms involving ice, aerosols, clouds and radiation. ASCOS will contribute to knowledge vital for reducing serious model deficiencies in understanding and describing interactions in the Arctic cloud-capped boundary layer. ASCOS will in addition provide data for calibration and development of algorithms for satellite monitoring. ASCOS thus addresses the most fundamental outstanding scientific issue of the ACIA report; how to monitor and predict Arctic climate change. In doing so, ASCOS adheres to the research priorities given in the "Nordic Council of Ministers' Co-operation Programme for the Arctic 2006–08".

How will the results be disseminated?

The progress of the project will be reported regularly to NCM.

The ASCOS results will be presented in peer-reviewed scientific journals, following presentation of preliminary project results at scientific conferences. The target groups here are mostly fellow scientists.

The ASCOS community is ready to supply first-hand information on the state and future of the high-Arctic to any national governmental or Nordic organization that wishes to take part in the ASCOS results. We appreciate all suggestions from NCM on how this dissemination should be conducted in order to achieve maximum

	<p>policy-making effect. The related EU project DAMOCLES is expected to have a major policy-making effect within the EU.</p> <p>We also plan to disseminate our results to the public in the form of newspaper articles, open lectures and visits to schools. The Swedish Polar Research Secretariat regularly arranges radio and television broadcasts in connection with the Arctic expeditions, as well as press releases.</p>
Activities:	<p>The main activities will take place during an ice-drift operation. The icebreaker (Swedish) will be moored to an ice flow near the North Pole and drift passively, during the biologically most active period into autumn freeze-up conditions, roughly July through September. Instruments will be deployed both on board the icebreaker and on the ice. Ground-based remote sensing will provide continuous records of boundary layer and cloud structure, while in-situ instruments and vertical profiling will provide process-oriented information on boundary layer dynamics, aerosol/cloud evolution and ocean/ice biochemistry. Detailed aerosol and cloud profiling will be conducted by helicopter, tethered balloon and by land-based aircraft. To the best of our knowledge, this is the only suggested <u>Nordic</u> effort to conduct climate-related research in the high Arctic pack ice region north of 85°N during IPY.</p>
Target group:	<p>Scientists (e.g. via IPY)</p> <p>National governmental and Nordic organizations</p> <p>Policy-makers (e.g. via the related EU project DAMOCLES).</p> <p>The public (newspaper articles, open lectures and visits to schools, radio and television broadcasts, press releases).</p>
Participating Nordic countries:	Sweden, Finland, Denmark
Participating countries in the Arctic:	None (icebreaker expedition).
Co-operation Partners:	<p><i>Sweden:</i></p> <p>Prof. Erik Swietlicki, Div. of Nuclear Physics, Physics Department, Lund University, P.O. Box 118, SE-221 00 Lund, Sweden email: Erik.Swietlicki@nuclear.lu.se tel: +46-46-2229680</p> <p>Dept. of Meteorology, Stockholm University, SE-106 91 Stockholm, Sweden. Prof. Caroline Leck, tel: +46-8-164354, email: lina@misu.su.se Prof. Michael Tjernström, tel: +46-8-163110, email: michaelt@misu.su.se</p> <p><i>Denmark:</i></p> <p>Dept. of Chemistry, Univ. of Copenhagen, Universitetsparken 5, DK-2100 Copenhagen, Denmark. Prof. Ole John Nielsen, tel: +45-35-320331, email: ojn@kiku.dk Assoc. Prof. Merete Bilde, tel: +45-35-320329, email: mbilde@kiku.dk</p> <p><i>Finland:</i></p> <p>Finnish Meteorological Institute, Research and Development, P.O. Box 503, FI-00101 Helsinki, Finland. Prof. Veli-Matti Kerminen, tel: + 358-9-19295501, email: veli-matti.kerminen@fmi.fi Prof. Risto Hillamo, tel: + 358-9-19295500, email: Risto.Hillamo@fmi.fi</p>
Total budget:	>20 M DKK for all of ASCOS (of which 1543 K DKK applied for from NCM)
Arctic funds in 2007:	500,000 DKK
External funds:	<p>6.5 M SEK Swedish Research Council</p> <p>Ca 10 M SEK (Swedish Polar Secretariat)</p> <p>US NSF (pending)</p>
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	<p>Physics Department, Lund University, P.O. Box 118, SE-221 00 Lund, Sweden. tel: +46-46-2227631, fax: +46-46-2224709. email: Britt-Marie.Kallerhed@nuclear.lu.se</p>
Duration of project:	All of ASCOS: 2005–2011. NCM: 2007–2009

Project name: Enhancing IPY Studies on Climate and Environmental Pollution in the Arctic by Nordic Researchers (CLEAN)

Objectives:	<p>The scientific goals are (a) to contribute logistics synergy for IPY projects aimed at key unresolved aspects of the Arctic carbon cycle – climate link (as prioritized in the ACIA 2004 report) and (b) to provide the first comprehensive assessment of sources and exposures of environmental toxins along the entire 5000 km Eurasian-Arctic coast north of Scandinavia and Russia (important missing information according to AMAP, 2002)</p> <p><i>Expected result:</i> Improved synergy between disparate IPY activities, enhanced possibilities for Nordic researchers to pursue studies in Russian-territorial areas, and much-improved information on the delivery of environmental contaminants with the Great Russian Arctic Rivers.</p> <p><i>How will the results be disseminated?</i> While the results are primarily directed toward the international research community and will be presented in top-rating scientific journals and conferences, they are also likely to function as decision support for environmental-political problem owners and local indigenous populations; their organizations will be targeted for specific dissemination efforts. The media relations offices at our respective institutions will be employed to prepare press releases, and information will be continuously updated on the project web page. Finally, we will collaborate with an educational-outreach IPY project led by the Tromsø-Norwegian partner called "Web-based educational tool for schools on polar issues" (EDTOOL; IPY ID 617). This outreach project will be supported by our research findings communicated in an easily understandable form.</p>
Activities:	(a) a series of workshops to facilitate synergy between previously disconnected but related IPY projects; (b) novel analytical screening of the spatial distribution of significant environmental contaminants from north-Nordic and Eurasian rivers, (c) student training and Nordic exchange
Target group:	The international research community, environmental-political problem owners, indigenous populations, students.
Participating Nordic countries:	Sweden, Norway, Denmark, Finland.
Participating countries in the Arctic:	Russia.
Co-operation Partners:	<p>Örjan Gustafsson, Dept. of Applied Env Science, Stockholm University, 106 91 Stockholm, Sweden +46 8 6747317; +46 8 6747638; orjan.gustafsson@itm.su.se</p> <p>Ms Jorien Vonk, Dept. of Applied Environmental Science, Stockholm University, Sweden, tel. +46 8 6747317, email: jorien.vonk@itm.su.se</p> <p>Dr. Henrik Kylin, Polar Env. Centre, Norwegian Institute of Air Research (NILU), Tromsø, Norway, tel: +47 77 75 03 82, e-mail: henrik.kylin@nilu.no</p> <p>Dr. Merja Lyytikäinen, Department of Biology, University of Joensuu, Joensuu, Finland, tel: +358 13 251 3583, email: merja.lyytikainen@joensuu.fi</p> <p>Dr. Per Roos, Radiation Research Department, Risø National Laboratory, Roskilde, Denmark, tel. +45 4677 5319; email: per.roos@risoe.dk</p> <p>Dr. Igor Semiletov, Polar Geochemistry Division, Russian Academy of Sciences (POI), Vladivostok, Russia, tel. +7 4232 31 14 00, email: semiletov@poi.febras.ru</p>
Total budget:	2,400,000 DKK
Arctic funds in 2007:	600,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Stockholm University
Duration of project:	2007–2008

Project name: Nordic CAVIAR – Community Adaptation and Vulnerability in the Arctic Regions

Objectives: To identify how projected changes in climate interact with changes in social and natural conditions and how such interactions shape vulnerability and adaptation to climate change in Northern Norway and Northern Russia.

Sub-goals:

1. Identify how communities are sensitive to the combined effects of change in climate and to the interactions with changes in socio-economic and bio-physical conditions.
2. Identify how these conditions are expected to change with time.
3. Identify past adaptive strategies.
4. Assess the ability of local communities to manage changing conditions.
5. Identify how social, cultural, economic, and political processes operating at multiple scales affect adaptive capacity to changing climatic conditions.
6. Assess what further adaptations are needed and what can be done to enhance community adaptive capacity.
7. Compare case studies from Norway and Russia in terms of the role social conditions in determining and shaping vulnerability and in meeting adaptation needs.

Expected result:

To identify how projected changes in climate interact with changes in social and natural conditions and how such interactions shape vulnerability and adaptation to climate change in Northern Norway and Northern Russia.

CAVIAR is designed to be policy relevant:

- It engages community representatives and decision-makers in the research process to ensure that the items analyzed are pertinent to community members. This also facilitates the application of the research by decision makers.
- A fundamental step in the vulnerability assessment methodology is to identify the ways in which the community's members and governance structures deal with stresses and environmental changes, so that analyses of adaptive capacities and adaptation options are undertaken explicitly in the context of actual decision-making structures, authorities and policies. The research includes rigorous analysis of policies and decision making as part of the vulnerability assessment, contributing to the direct policy relevance of the results.
- The CAVIAR initiative includes an Advisory Board that involves policy makers at several levels with the opportunity to influence the research and to apply its results.

How will the results be disseminated?

CAVIAR involves close collaboration with local and indigenous communities throughout the project through the co-production of knowledge. Outreach and communication are on-going elements of the research effort and will not simply be an end product. The outreach activities will have a circumpolar focus and the local project participants will be involved in developing the best outreach and communication strategies for their communities and will be tasked with leading the effort in collaboration with researchers. It is critical that sufficient funds are included in forthcoming research proposals to cover such efforts. The project will develop a website, linked to the official IPY website, and the DAMOCLES website, for disseminating the knowledge and the results in an ongoing process. The website will include an interactive educational program for students in the primary and secondary grades. Such a program on the physical processes of climate change has been successfully developed and implemented by CICERO and the University of Oslo in Norway (viten.no: "On thin ice"). This educational program can easily be adapted and translated into the languages of the other participating Polar nations. Information and understanding of the human dimensions of climate change from CAVIAR will be an important contribution to this program.

Research on adaptation and vulnerability is relevant for decision-makers, and the results and information from the project will be made available and accessible for developing adaptive strategies for communities. This will require careful translation to relevant languages. It would be a goal to create an interest among local residents and professional photographers to produce visual materials such as films from the project aimed at the general public. Such efforts require massive monetary resources. The project will actively develop links to the EOC efforts of other IPY projects such as DAMOCLES and EALÁT. CAVIAR will be linked with the www.theartic.is (Human Dimensions of Arctic Environments) an ongoing educational and multilingual platform. Through the active participation of young scholars in all phases of the program, a cohort of highly qualified personnel with expertise in interdisciplinary study, community engagement, and policy-relevant research will be developed.

Activities:	Stage	Activities	Methodologies	Data Sources
	Scoping	Meet with regional organizations/ decision-makers to identify potential communities; Collect baseline information; Field visit to establish legitimacy, acceptance, identify local partners	Literature survey and review, semi-structured interviews	Published literature, key informant interviews
	Data Gathering:	Secondary source data collection	Qualitative research methods including semi-structured interviews, focus groups, surveys. Collaboration with natural scientists	Published literature, grey literature, climate records and
	Current Exposure-Sensitivity, Adaptive Capacity	Field work in communities		natural scientists, in-community field work.
	Data Gathering:	Secondary source data collection	Qualitative research methods, natural and social science modelling	Scientific experiments, models, in-community field work.
	Future Exposure-Sensitivity, Adaptive Capacity	Field work in communities Prediction of future conditions		
	Comparison/ Integration	Comparison to other case studies, In-Community field work, analysis of results with collaborators	Data-gathering as above, Collaborator workshops	Data as above, case study outcomes; other IPY projects
	Feedback/Dissemination		Field follow-up visits, popular media, conferences, scholarly publications including edited book	
Target group:	Policy makers, researchers.			
Participating Nordic countries:	Norway, Finland, Sweden, Greenland, Iceland,			
Participating countries in the Arctic:	Russia, Canada, Alaska, USA.			
Co-operation Partners:	Norwegian Meteorological Institute (met.no), Institute of Northern Nations, Russian Herzen State Pedagogical University,			
Total budget:	5,981,000 DKK			
Arctic funds in 2007:	300,000 DKK			
Responsible sector in NCM:	Education, Research and Labour Market , Department Co-ordinator Randi Baad Mårtensson rbm@norden.org			
Administrative body:	CICERO.			
Duration of project:	01.01.2007 – 31.12.2010			

Project name: Arctic-Atlantic Exchanges (ARATEX)

Objectives:	<p>The project aims to monitor the exchanges of water, heat, and salt between the Arctic and the Atlantic across the Greenland-Scotland Ridge through the project period: 2007–2009 and to put these into a longer time perspective by combining measurements and model results.</p> <p><i>Expected result:</i> Extended time series of water, heat and salt inflow from the North Atlantic to the Nordic Seas</p> <ul style="list-style-type: none"> • Extended time series of the Faroe Bank Channel overflow • Numerical model time series 1948-present of the exchange between Atlantic and Arctic • A better understanding of the mechanisms driving and controlling the exchanges. <p><i>How will the results be disseminated?</i> Results from this project will be disseminated through three main channels:</p> <ul style="list-style-type: none"> • Scientific publications The project partners have a proven record for frequent publishing in peer reviewed journals, including high impact journals such as Nature and Science, and will continue a high publishing frequency throughout the project period. • Time series website The project will produce time series of exchange fluxes, which will be important as boundary conditions for many other studies in the Arctic. It is planned to make these time series generally available in a timely manner on a website. • Public media Possible changes in the Atlantic THC is a topic of large public interest as witnessed by the many TV and movie productions addressing it and the exchanges between the Arctic and the Atlantic are an essential part of this. The project partners feel a responsibility to communicate project results as an informative and balanced input to this ongoing public debate.
Activities:	<p>Maintain continuous monitoring of all three branches of Atlantic inflow to the Arctic and the heat and salt that they import.</p> <p>Maintain continuous monitoring of the deepest and most persistent overflow branch, the Faroe Bank Channel overflow.</p> <p>Combine contemporary and historic measurements with results from a well-proven model to hindcast all the exchange branches for the period since 1948.</p> <p>Use model and observational results to explore the mechanisms that control the exchanges in order to clarify possible changes in a future climate system.</p>
Participating Nordic countries:	Iceland, Faroe Islands, Norway, and Denmark.
Co-operation partners:	<p>Steffen M. Olsen, Danish Meteorological Institute (DMI), Copenhagen, Denmark, www.dmi.dk Email smo@DMI.dk, Ph. + 45 39157217</p> <p>Bogi Hansen, Fisheries Laboratory of the Faroes (FFL), Torshavn, Faroe Island, www.frs.fo E-mail: bogihan@frs.fo, Ph. +298 353915</p> <p>Hedinn Valdimarsson, Marine Research Institute (MRI), Reykjavik, Iceland, www.hafro.is E-mail: hv@hafro.is, Ph. +354 5752063</p> <p>Steingrímur Jónsson, University of Akureyri and Marine Research Institute, Akureyri, Iceland, www.unak.is E-mail: steing@unak.is, Ph. +354 4608972</p> <p>Svein Østerhus, Bjerknes Centre for Climate Research (BCCR), Bergen, Norway, www.bjerknes.uib.no E-mail ngfso@uib.no, Ph. + 47 55582607</p>
Total budget:	2412 (2007), 3414 (2008), 2412 (2009) TDKK
Arctic funds in 2007:	500,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Bjerknes Centre for Climate Research. Allegt. 55, N-5007 Bergen www.bjerknes.uib.no
Duration of project:	2007–2009

Project name: BalticSeaBird International Conference

Objectives:	<p>Primary objectives: Increase international collaboration on seabird conservation issues and strengthen Swedish and Nordic Research in Marine Ecology. Put the Nordic and Baltic Seas on the map on international seabird research.</p> <p>Secondary (long term) objectives: Strengthening Nordic and Baltic partnership and scientific engagement and input to the Arctic Council and CAFF (Conservation of Arctic Flora and Fauna).</p> <p>Expected result: Our ambition is that the conference will highlight the importance of seabird research and conservation to Nordic, and not least Swedish, authorities, an issue that has not been sufficiently acknowledged when it comes to Sweden. One indicator for fulfilment would be national recognition of the need for a formal Swedish participation in the working group. Other indicators include new relevant research initiatives.</p> <p>How will the results be disseminated? The outcome of the conference will be summarised in a report. Studies performed by the working group will primarily be published in scientific journals or as CAFF technical reports, which include e.g. policy recommendations to the Arctic council.</p>
Activities:	An international conference, including three working days and one field trip. We will also host a welcome reception and a farewell dinner.
Target group:	Representatives from research and management authorities in the Arctic region.
Participating Nordic countries:	Sweden, Norway, Denmark (with participants from the mainland of Denmark, from Faroe Islands and from Greenland), Finland, Iceland.
Participating countries in the Arctic:	Sweden, Norway, Denmark, Finland, Iceland, Russia, United Kingdom, Canada, USA.
Co-operation partners:	Swedish Environmental Protection Agency.
Total budget:	70,000 SEK excl. expenditures for conference premises and facilities.
Arctic funds in 2007:	65,000 DKK
Sector funds:	Swedish Environmental Protection Agency. Conference premises and facilities, in kind.
External funds:	The BalticSeabird research project is funded by WWF Sweden. Our participation at the meeting and part of the preparatory work will be funded by the WWF grant.
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Department of Systems Ecology Stockholm University SE-106 91 Stockholm +46 8 16 20 00
Duration of project:	Preparation: 2007-01-01 – 2007-02-27 Conference: 2007-02-28 – 2007-03-03 Evaluation: 2007-03-05 – 2007-03-12

Project name: Support to AMAP's assessment of Oil and Gas activities in the Arctic, and Acidification and Arctic Haze in Northern areas, to be presented to the Arctic Council Ministerial meeting

Objectives:	<p>The main objectives of this project are to present two reports that describe the pollution situation in Northern areas of the Nordic countries, Russia, Canada and USA. One of the reports focuses on Arctic Acidification and Arctic Haze, and the other on Oil and Gas activities in the North. The reports shall include information regarding trends and effects on Arctic ecosystems and humans. The oil and gas report shall also include an assessment of the socio-economic consequences over the period that oil and gas activities have occurred, and to present some scenario for the next 10-20 years. The reports shall also present possible action to reduce pollution today and in the future.</p> <p><i>Expected result:</i> The report on Arctic Acidification and Arctic Haze was published and presented to the Arctic Council ministerial meeting in Russia, October 2007. The report documents that in high Arctic areas, such as the Alert station on Ellesmere Island in Canada, a decreasing trend for sulphur and an increasing for NOx levels has been observed. In addition it appears that the positive improvement in Arctic Haze has stopped over the last years, most probably due to increase in forest fires in the North. The results are of great importance for the work under LRTAP and the Gothenburg protocol. They have received the reports.</p> <p><i>How will the results be disseminated:</i> For each of these two assessments two reports are produced, one scientific report where all data, assessments and references are listed, and one overview report written in layman's English so the information can be made available to a wider audience. All reports are available from the AMAP Secretariat in Oslo, and will be made available from AMAP web site www.amap.no. In addition the results will be presented at several international conferences and special Arctic meetings where oil and gas are on the agenda. Part of the material will also be published in international scientific journals.</p>
Activities:	<p>Expert groups composed of people from the eight Arctic countries have prepared these reports over the last three years. Several expert meetings, workshops, and one international symposium (St. Petersburg, September 1995) have been held. The report on Oil and Gas was, however, not finalized as expected in 2007 since essential information from Russia and USA was missing. Part of this information has now been made available (May 2007). Most of the chapters are ready for technical and linguistic editing.</p> <p>The Overview report for oil and gas will be printed during the autumn of 2007, while the scientific report will be presented in 2-3 Volumes during 2007/2008.</p>
Target group:	Decision makers, politicians, researchers and the general public
Participating Nordic countries:	Norway, Denmark, Finland, Iceland and Sweden
Participating countries in the Arctic:	Canada, Russia and USA
Co-operation partners:	In addition to co-operation with governmental and research institutions in the eight Arctic countries for the oil and gas report, we have co-operated with some oil and gas companies at practical events (symposia) and in the presentation of background information. In addition we have had a close co-operation with UNECE regarding the acidification report.
Total budget:	4,290,000 DKK
Arctic funds in 2007:	400,000 DKK
External funds:	3,343,000 DKK
Responsible sector / Department:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	AMAP Secretariat
Duration of project:	2005-2007.

Project name: AMAP – Effect of climate change on transport, levels and effects of contaminants in northern areas

Objectives:	<p>The objective is to clarify the possible effects of climate change on transport of contaminants (pollution) in the Northern areas, as well as to clarify what effects this can have for the levels in the environment and the effects on animals and humans.</p> <p><i>Expected result:</i> Documentation of possible connections between climate change and transport and the accessibility of various contaminants, and thus the clarification of possible effect on plants, animals and humans.</p> <p><i>How will the results be disseminated?</i> Several individual publications will be issued in international journals. The results will be used in an AMAP assessment of the state of pollution and climate change in the Northern areas. If funding permits, a video will also be produced.</p>
Activities:	<p>Modelling of transport of different contaminants (for example S, N, HCH, PCB, BFRs, Hq, Cs, etc.) using existing climate and transport models.</p> <p>Observation of fallout of the same contaminants at several Arctic atmosphere stations and on elevated ground.</p> <p>Historic observation of the variation in levels of contaminants in ice and sediment core to clarify possible connections with variation in climate (temperature and precipitation/fallout) in earlier times.</p> <p>Field measurements of levels in animal and plant food and laboratory tests to examine the processes.</p> <p>Study of changes in levels in traditional food and thus absorption in humans.</p>
Target group:	Ministers, decision makers, researchers and the general public.
Participating Nordic countries:	Denmark, Finland, Norway, Sweden
Participating countries in the Arctic:	Canada, Russia
Co-operation partners:	Jesper Christensen, Jon Ø. Odland, Jens C. Hansen, Cynthia de Wit, Roland Kallenborn, Per Strand, Morten Sickel, Martin Forsius, Andy Gilman, Robie MacDonald, Peter Outridge, et. al. Co-ordination with other IPY projects, for example, COPOL.
Total budget:	18,705,000DKK – depending on funding from the World Bank to the parts of the project in Northern Russia.
Arctic funds in 2007:	400,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	AMAP Secretariat
Duration of project:	2005–2009.

Project name: KINNVIKA: Changes and Variability of the Arctic System – Nordaustlandet, Svalbard

Objectives:	Promote Nordic research work in Nordaustlandet, Svalbard during the International Polar Year. <i>Expected result:</i> Five successful expeditions, as well a large amount of IPY outreach to the public and multidisciplinary communication through seminars and workshops. <i>How will the results be disseminated?</i> Through outreach communication to the general public, through our website, as well as www.ipy.org , and, naturally through appropriate scientific journals.
Activities:	Funding for Logistics, Outreach and Communication.
Target group:	Polar scientists and the general public.
Participating Nordic countries:	Denmark, Finland, Iceland, Norway, Sweden.
Participating countries in the Arctic:	Norway, Russia.
Co-operation partners:	Other IPY projects such as IPY-Damocelles, IPY-Glaciodyn, IPY-Lashipa.
Total budget:	260 K EUR (excluding research project money).
Arctic funds in 2007:	500,000 DKK
External funds:	120 K EUR.
Responsible sector in NCM:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Arctic Centre, University of Lapland.
Duration of project:	2007–2009.

Project name: The Freshwater budget and the Nordic Seas (FreshNor)

Objectives:	Co-ordinate Nordic modelling efforts to improve the understanding and description of the hydrological cycle in the Nordic Seas, the Arctic region and the Nordic countries. A common Nordic modelling platform will be developed, which will facilitate co-operation of Nordic climate change research with an Arctic focus.
Activities:	3 meetings are planned for the spring of 2007 and 2008 and summer/autumn 2009. The first two will be in the form of project workshops and the last will be a final interdisciplinary workshop where a few keynote speakers will be invited and the theme will be: What are the most essential improvements from climate change modelling requested by the impact community and how can the network bring this forward? The key elements in this networking project are the following 6 tasks: Breakdown of the hydrological cycle for Nordic Seas Atmospheric contribution to the freshwater budget Cryospheric contribution to the hydrological cycle Oceanic (including sea-ice) contribution to the freshwater budget Land surfaces contribution to the freshwater budget The role of changes in the freshwater budget – physical and biological change <i>Expected result:</i> A common Nordic modelling platform for climate change research <i>How will the results be disseminated?</i> Participation in international and national meetings where results will be presented, publication in international scientific journals related to the specific research fields. An internet homepage will be maintained explaining the developments within the project. If funding permits, a brochure will be produced to highlight the objectives and goals of the project.
Target group:	Scientific community engaged in Arctic climate impact assessments; specific model output products will be targeted at fisheries, transportation institutions, and hydro-electric power industries.
Participating Nordic countries:	Denmark, Sweden, Iceland, Norway, Greenland.
Participating countries in the Arctic:	USA, Russia, Canada, and Germany via Advisory Board.
Co-operation partners:	Danish Climate Centre, Danish Meteorological Institute, Copenhagen Rosby Centre, Swedish Meteorological and Hydrological Institute, Norrköping, Icelandic Meteorological Institute, Reykjavík, Nansen Environmental and Remote Sensing Centre/Bjerknes Centre for Climate Research, Bergen, Greenland Institute of Natural Resources, Nuuk
Total budget:	1,095,000 DKK
Arctic funds in 2007:	300,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.orgf
Administrative body:	Danish Meteorological Institute (DMI). Att.: Dr. Jens Hesselbjerg Christensen
Duration of project:	2007–2009.

Project name: Collecting, growing and using Greenlandic grasses and medicinal plants for use in the Arctic area

Objectives: The goal of the project is to collect, grow and use Greenlandic grasses and medicinal plants to be able study these closer for the benefit of the whole Arctic area. The project aims to improve knowledge on these plants and grasses, so that this knowledge may be used to secure the future survival of these plants and make them more able to resist pollution, heavy metals and climatic changes in the Arctic area. The project will follow up on the Nordic Council of Ministers' priorities of securing the local production by supporting the improvement of the yields of the local species and increasing the quality of these. In this way the project will contribute to secure the local culture and the traditional way of living for both people and animals in all of the Pan-Arctic area.

Expected result:

The collection of grasses and medicinal plants forms part of the Nordic Gene Bank's normal collection for use in research and processing according to NGB's remit. The seeds from grasses and plants are registered in NGB's electronic SESTO system which is available world-wide and through NGB's website and will be made available to a wider public. The results of the expedition will also form the basis for a number of articles in plant genetic journals, which will strengthen the Nordic focus and promote it in international research.

How will the results be disseminated?

The results will be disseminated in a report at the end of Phase III of the project.

Activities:	Activities	Phase II 2007
	Establishment in the field	Grasses established
	Morphological description	
	Molecular biological analysis	Grasses, medicinal and spice plants analysis
	Chemical analysis	Analysis of grasses for protein and fibre
	Propagation of seeds or plant material	Propagation of plant material

Target group: The Pan-Arctic area as well as the Nordic countries. International genetic research in the long-term.

Participating Nordic countries: Sweden, Denmark, Iceland and Norway and Finland

Participating countries in the Arctic: Greenland

Co-operation partners: Nordic Gene Bank, Greenland Institute of Natural Resources, Agricultural Research Institute of Iceland, Swedish Agricultural University, Norwegian Genetic Resource Centre

Total budget: 1,465,600 DKK

Arctic funds in 2007: 280,000 DKK

Responsible sector in NCM: Arctic, Adviser Nikolaj Bock, nb@norden.org

Administrative body: Nordic Gene Bank

Duration of project: 2006–2008.

Project name: Global Change Impact on sub-arctic palsa mires and greenhouse gas feedbacks to the climate system (PALSALARM)

Objectives:	<p>The project has four specific objectives: to map the current distribution of palsa mires</p> <ul style="list-style-type: none"> - to model future changes in palsa mire distribution due to projected climate warming - to estimate future changes in the CH₄ and CO₂ budgets of palsa mires; and - to assess the ecosystem implications of palsa mire degradation and investigate possible conservation measures. <p><i>Expected result:</i> Deliverables of the project include maps of present and future palsa distribution estimates of greenhouse gas (GHG) fluxes today and in the future identification of threatened landscapes, habitats and species recommendations of measures to monitor and (if possible) to conserve these unique landscapes</p> <p><i>How will the results be disseminated?</i> The project results will be disseminated through: a project web page to be set up at the beginning of the project scientific publications a workshop report in the 2nd year of the project (if funding for the 2nd year can be secured) a final report to summarize the results of the project at the end of the project period</p>
Activities:	Research
Target group:	Researchers, decision-makers.
Participating Nordic countries:	Denmark, Finland, Sweden.
Total budget:	2007: 1,552 K DKK
Arctic funds in 2007:	500,000 DKK
Responsible sector in NCM:	Environment, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Finnish Environment Institute (co-ordinating institute)

Project name: UArctic Thematic Network on Global Change in the Arctic

Objectives:	The objective of the project is to develop the first phase in new curriculum on Global Change, based on the findings of ACIA in areas of gaps identified by the project participants. It strengthens networking and co-operation in education by building up the University of the Arctic Thematic Network on Global Change in the Arctic.
Activities:	<p>Project begun in February-April 2006 with the web survey and questioning of existing global change courses in the curriculum of UArctic member institutions resulting in an overview of Global Change courses in UArctic's member institutions and a listing of these courses in the Global Change course catalogue at the website: http://www.uarctic.org/completeArticles.aspx?m=337. The results of the web survey were presented and analysed to identify the gaps in education in project workshop in May, 2006 in Rovaniemi, Finland. The workshop produced six short concepts of the identified course outlines to be further developed. An open call to UArctic members was arranged to identify teams for the completion of the courses delivered online. The curriculum development starts in March-April by team workshops, and courses will be completed by May 2008. The curriculum is ready for online pilot delivery for fall 2008.</p> <p><i>Expected result:</i> This project has three concrete outputs: 1) The UArctic Thematic Network on Global Change in the Arctic with circumpolar representation. 2) New curriculum to fill most obvious gaps in global change curriculum. 3) Plan for future activities for UArctic Thematic Network on Global Change in the Arctic.</p> <p><i>How will the results be disseminated?</i> Information about the project will be disseminated throughout the duration of the project on the UArctic website (http://www.uarctic.org/singleArticle.aspx?m=174&amid=405) and Shared Voices Newsletter, and also as a part of UArctic's regular reporting internally (Council and Board of Governors) and externally (the Arctic Council, Arctic Parliamentarians).</p>
Target group:	University of the Arctic member organisations, especially Master's students.
Participating Nordic countries:	Finland, Sweden, Norway, Iceland, Denmark (incl. Greenland).
Participating countries in the Arctic:	Russia, Canada, USA.
Co-operation partners:	Lars Kullerud, UArctic Director, UNEP Grid-Arendal, Norway, Outi Snellman, UArctic International Secretariat, University of Lapland, Finland, John Moore Arctic Centre, University of Lapland, Finland, Bruce Forbes University of Lapland, Finland, Pierre-André Forest, University of Lapland, Finland, Kari Strand, University of Oulu, Finland, Arja Rautio, University of Oulu, Finland, Atte Korhola University of Helsinki, Finland, Grete Hovelsrud-Broda Centre for International Climate and Environmental Research, CICERO, Oslo, Norway, Geir Gotaas University of Tromsø, Norway, Else Grete Broderstad, Sami Centre, University of Tromsø, Norway, Jan Idar Solbakken Sami University College, Norway, Svein Mathiesen International Centre for Reindeer Husbandry, Norway, Eystein Markusson University Centre in Svalbard, UNIS, Norway, Joan Nymand Larsen, Stefansson Arctic Institute and University of Akureyri, Iceland, Terry Callaghan Abisko Research Station, Sweden, Peter Sköld Umeå University, Sweden, Åke Bjørke Global Virtual University/United Nations University, Norway, Yvon Csonka IASSA Secretariat, Greenland, Rasmus Rasmussen University of Roskilde, Denmark, Rune Sverre Fjelleheim Indigenous Peoples' Secretariat (IPS), Denmark, Robert Corell ACIA Chair, Cindy Dickson Arctic Athabaskan Council, Mark Nuttall University of Alberta, Canada, Leslie King, University of Manitoba, Canada, Audra Krueger University of Saskatchewan, University of the Arctic Undergraduate Office, Saskatoon, Canada, Richard Boone University of Alaska Fairbanks, USA, Larissa Riabova Kola Science Centre RAS, Russia, Rodion Suluyandziga Center for Support of Indigenous Peoples of the North, Russia, Claudia Fedorova, Sakha State University, Russia.
Total budget:	3,800,000 DKK for years 2006-2008
Arctic funds in 2007:	400,000 DKK
Responsible sector in NCM:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	Project leader Kari Laine, Co-ordinator Kirsi Latola and Steering Group.
Duration of project:	2006-2008.

Project name: An Arctic Interactive Mapping Portal – a subproject of the Arctic Portal

Objectives:	<p>The goal of the project is to provide all stakeholders of the Arctic (public administration, politicians, scientists, indigenous and local communities, the general public) a tool to present and view data in a fast, flexible user friendly interactive GIS compatible mapping portal, within the Arctic Portal. The first stage of the interactive map has been developed as a part of the design of the Arctic Portal. It is evident from the response received that the need for an advanced interactive tool capable of integrating the existing and expected data and maps of the Arctic is highly anticipated and appreciated.</p> <p><i>Expected result:</i> The Arctic Portal interactive map will enable groups with limited financial capabilities to make information available to others across the globe. This will further strengthen those involved programs such as sustainable development by creating both a way to communicate with more ease as well as giving a more convenient way to access and cross reference data specifically related to the Arctic. A key element in the project is to identify new and better ways of strengthening communication and co-operation within the Arctic and about the Arctic. This includes and benefits professionals, the indigenous peoples and the public.</p> <p><i>How will the results be disseminated?</i> The Arctic Portal interactive map will be revealed on the Arctic portal as it develops and is foreseen as one of its most important components. It will grow in accordance with the needs of the users and therefore be more publicized as it matures. The Arctic Portal is an IPY endorsed project and a partner to IPO and the Interactive map will be used in the promotion of IPY and IPO projects.</p>
Activities:	<ul style="list-style-type: none"> - Identification of Portal Projects, which might be co-ordinated or integrated with the Arctic Interactive Mapping Portal, evaluation of current and proposed data. Building of a network. - Identification of user requirements – design of templates - Data and mapping structuring and application - Software design, application and development, set up and management - Opening of an advanced mapping portal within the Arctic Portal.
Target group:	Stakeholders of the Arctic (public administration, politicians, scientists, indigenous and local communities, the general public)
Participating Nordic countries:	<p>All the Arctic Council working groups are participating in the project with the secretariats as contact points. NOTE that ALL the Nordic countries participate in the Arctic Council working Groups.</p> <p>Further to the working groups the project has the support and active participation from numerous other organisations including but not limited to the following: Grid-Arendal, Joan.Eamer, Joan.Eamer@grida.no, Norway The Arctic Center, Arto Vitikka, arto.vitikka@ulapland.fi, Finland Sami University College - Mai Britt Utsi, Rector Reindeer Herders International Centre , Anders Oscar, anders.oscal@reindeerworld.org, Kautokeino, Norway</p>
Participating countries in the Arctic:	<p>Association of Reindeer Herders (partners distributed throughout Northern Russia) and the Northern Forum, Yamal.</p> <p><i>Other countries:</i> Yukon First Nations, Colleen Henry, Canada UNEP-WCMC - Christoph Zockler, Cambridge, UK IPY-IPO, Cambridge, UK</p>
Co-operation partners:	Reindeer Herders International Centre , Anders Oscar, Kautokeino, Norway University of Akureyri – Nik Whitehead, Dean Faculty of Natural Resource Sciences.
Total budget:	4,000,000 DKK (1 million per year)
Arctic funds in 2007:	300,000 DKK
Responsible sector in NCM:	Arctic, Adviser Nikolaj Bock, nb@norden.org
Administrative body:	ICEPORT / Teikn á Lofti, Iceland Skipagata 12, 600 Akureyri Iceland
Duration of project:	4 years, 2006–2009