



Research in the Nordic Countries – Co-operation

Research and the climate for innovation together constitute prerequisites for the development of our societies and for our wealth. In the ever increasing global competition that research is subjected to today, purposeful measures and renewed co-operation are required to strengthen and maintain good research efforts at a high international level.

The Nordic countries hold an internationally leading position in many areas and this could be even better utilised to create further synergies and a stronger profile. The Nordic Ministers for Education & Research (MR-U) have developed concrete and practicable proposals for restructuring Nordic research co-operation and making it more efficient.

These proposals are described in the *White Paper* on research and innovation, published in 2003. *The White Paper* and the *Innovation Paper – Proposal for a Nordic Co-operation Programme for Innovation Policy, 2005–2010*, are central documents for the establishment of a Nordic Research and Innovation Area (NORIA). The Innovation Paper was commissioned by the Nordic Ministers for Trade & Industry (MR-N).

NORIA constitutes the platform of a two-pillar system intended to strengthen co-operation in basic and applied research and innovation in the Nordic countries. From 2005, the research pillar is made up of the Nordic Research Board (NordForsk) and the innovation pillar of the Nordic Centre for Innovation (NICe). Together with MR-U and MR-N, these three actors may be considered to form a Nordic triple helix.

Aim of Nordic Research Co-operation

The Nordic Ministers for Education and Research have agreed on the following points as the overriding goal for Nordic co-operation:

- To give the Nordic countries a leading position in competence development and research, with the emphasis on development of human resources.
- To stimulate the exchange of experience and development of research and innovative Nordic initiatives in this field.
- To strengthen and develop Nordic co-operation to promote common Nordic interests at the international level, with particular emphasis on the adjacent areas.

Nordic co-operation with other countries

Since 1991, the Nordic Council of Ministers has been co-operating with the three Baltic countries; Estonia, Latvia and Lithuania. Following the accession of the Baltic countries to the European Union, this co-operation continues as with the other EU countries, but with the primary political aim of developing a common Nordic-Baltic education and research area. Co-operation with Northwest Russia has been ongoing since 1995 and this also continues, with the emphasis on project co-operation. For both areas, the co-operation is managed by two contact groups with their own plans of action.

The Nordic voice in the European Union will be strengthened through consultation and co-ordination with interested parties, while taking national interests into account at the same time. The Council of Ministers

is also participating actively in other international fora, such as the Council of Europe, the OECD, The Council of Baltic Sea States (CBSS), UNESCO, the Barents Council and the Arctic Council.

Organisation

The research co-operation under the auspices of the Nordic Council of Ministers includes Nordic institutions, research programmes, the Nordic Centres of Excellence (NCoE) and support activities managed by the Nordic Academy for Advanced Study (NorFA).

The Ministers for Education and Research have the primary responsibility for this field of research, but many other research activities are also ongoing; e.g. in the fields of health and welfare, the environment, trade and industry, fisheries, forestry and agriculture, culture, equality, etc. This fact sheet mainly describes the research activities that are the responsibility of the Council of Ministers for Education and Research.

The Council of Ministers for Education and Research (MR-U) is made up of the Nordic ministers for education and research. Within the MR-U there is an advisory structure composed of a Nordic committee of senior officials (ÅK-U) and a number of advisory groups (management committees). The management committee for research is the Nordic Research Policy Council (FPR). The work of the MR-U is based on three-year strategies. Each management committee develops its own annual action plan on the basis of these strategies. The new Nordic Research Board (NordForsk) will be established in 2005 and will

then, among other strategic tasks, assume responsibility for the work carried out today by the FPR and NorFA.

Nordic Centres of Excellence (NCoE) – A new Concept in Nordic Research Co-operation

These centres for research of the highest excellence are one of the new and successful initiatives for stimulating research environments in the Nordic countries. The Nordic Centres of Excellence will promote researcher mobility, education and exchange between Nordic groups of researchers through the establishment of networks involving at least three Nordic countries, or geographical centres placing specialised equipment at the disposal of research scientists. Researcher training will specifically be included in the activities of one or more of the Nordic Centres of Excellence.

The Nordic Centres of Excellence will work towards achieving the following objectives:

- to make Nordic research more visible and more attractive in Europe and internationally;
- to guarantee that Nordic resources, in particular expensive infrastructure, are used as efficiently and flexibly as possible;
- to support creative and efficient environments for research and researcher training;
- to create a Nordic critical mass;
- to improve mobility, above all among young research workers;
- to ensure interdisciplinary co-operation;
- to achieve an appropriate division of specialisations between the Nordic countries in the fields of research and competence; and
- to integrate the Nordic Centres of Excellence in the national research systems.

Programme – Global Change (NCoE)

Four centres of excellence in the field of global change research were established in 2003. They are carrying out research on a) the effect of climate change on ecological systems; b) the effects of climate change on the biosphere; c) the exchange of carbon dioxide and methane between the atmosphere and the ecosystems; and d) the use of the luminescence method in dating. The three first centres consist of extensive networks of groups of researchers, while the last centre places equipment and infrastructure at the disposal of research scientists. Two Nordic Graduate Schools operate in conjunction with the first three centres.

More information is available at www.aka.fi – choose “The Nordic Centre of Excellence Programme.”

Programme – Molecular Medicine (NCoE)

In 2004, three centres of excellence initiated their work on molecular medicine, a field in which the Nordic countries already have strong co-operation and several competitive advantages. Increased co-operation between Nordic research workers means a joining of efforts to maximise the use of resources and making this field of research more visible and attractive.

The three centres carry out research in the following fields: a) water balance/ neuroscience (migraine, epilepsy, stroke, etc.); b) neurodegenerative disorders (Parkinson’s disease, Alzheimer, etc.) and c) disease genetics (cancer, autoimmune diseases, metabolic disturbances, etc.).

More information is available at www.vr.se/medicin – choose “In English,” then “International Collaboration.”

NordForsk: The Nordic Research Board – A New Research Body

The Nordic Research Board (NRB) will be established in 2005 and will as-

sume an important role for realising the vision of the Nordic region as a leading and integrated research area. The NRB will be an independent body under the auspices of the MR-U, with responsibility for Nordic co-operation in research and researcher training, as well as for co-operation and co-ordination with the Nordic Centre for Innovation (NICe). The NRB will have a board and a secretariat. The national research councils (and other research-funding bodies) and the universities will be the central players in the NRB.

The focus of the co-operation will be research areas in which the Nordic countries are scientifically strong and possibly enjoy an internationally leading position. The aim should be to promote research of the highest international quality. In this way, the Nordic countries can stand stronger in the competition for European research funds than the individual countries could manage on their own.

Nordic funds should be regarded as marginal/seed financing for joint support to the best institutions, researchers and research groups. Synergies between Nordic and national resources can be promoted by delegating the decision-making responsibility and the competence for granting of funds in the NRB to the national research councils.

The Nordic Research Board has a strategic task to perform to elucidate and strengthen areas and applications where the Nordic countries are particularly strong. Against this background, the Nordic Research Board can be said to perform three functions: co-ordination, funding and policy-making.

More information is available at www.norden.org – choose “Co-operation,” then “Research.”

The Nordic Research Policy Council (FPR) – An Advisory Body

The Nordic Research Policy Council (FPR) was established in 1982 by the Nordic Council of Ministers and is the



advisory body to the Council of Ministers on long-term research policy issues. The task of the FPR is to promote Nordic co-operation within research and researcher training. On the basis of analyses of the development of research policy, both in the Nordic countries and in Europe, the FPR will advise on research policy issues of relevance to the Nordic region. The tasks of the FPR will be assumed by the Nordic Research Board during 2005.

The Nordic Academy for Advanced Study (NorFA) – A Support Body and an Academy

NorFA has two main functions to perform; that of a granting body and that of an academy. As a granting body, NorFA stimulates interaction between researcher training environments in the Nordic countries, and as an academy, NorFA strengthens Nordic researcher training and research by creating venues, stimulating renewal and working for exchange of ideas and experience. Integration with the adjacent areas has been intensified through the work of NorFA Nabo. The tasks of NorFA will be assumed by the Nordic Research Board during 2005.

Among other things, NorFA has established Nordic graduate schools in four different fields of research:

- NCoE – Global change
- NCoE – Molecular medicine
- HUM/SAMF graduate schools, within the humanities and social sciences
- The Nordic Marine Academy

NorFA manages the Nordic Council of Ministers' four thematic research programmes: Gender and Violence, Language Technology, West-Nordic Ocean Climate and Longitudinal Epidemiology.

More information is available at www.norfa.no.

Research programmes

Nordic Research Programme on Gender and Violence

The aim of the programme is to connect small and dispersed research communities in the Nordic region and to support competence development and researcher training in the Nordic countries. Priority research areas in the programme are, among others, power, violence and sexuality, as well as gender-specific processes and the implications of "culture" and "cultures" for these processes.

More information is available at www.norfa.no – choose "Gender and Violence" from the menu.

Nordic Research Programme on Language Technology

The aim is to create a profile for the Nordic language community and ensure/boost the use of Nordic languages within the area of language technology. The programme is also intended to enhance communication among Nordic language technology researchers and teaching collaboration, as well as establish facilities and documentation centres.

More information is available at www.norfa.no – choose "Language Technology" from the menu.

Nordic Research Programme on West-Nordic Ocean Climate

The aim is to develop a quantitative description, using observations and modelling techniques, of the three most important sea currents in the area, changes to these currents and the ensuing influence on plant and animal life. Changes to these sea currents, i.e. the warm Gulf Stream and the cold East Greenland and East Iceland currents, have a strong influence on living conditions and fishery in the West Nordic countries.

More information is available at www.norfa.no – choose "West-Nordic Ocean Climate" from the menu.

Nordic Research Programme on Longitudinal Epidemiology

The Nordic countries are unique in terms of well-developed population records and other databases. This programme supports the development of entirely new data through linking and matching of different databases in the Nordic countries. The results are expected to lead to greater understanding of the importance of different risk factors and to make an important contribution to international research.

More information is available at www.norfa.no – choose "Epidemiology" from the menu.

Nordic Programme on Welfare Research

The aim of this research programme is to examine the model of the Nordic welfare state from a European perspective. This involves clarifying whether a specific Nordic model really exists – and if so, within which areas – and then to analyse the relative success of such a model.

More information is available at www.program.forskningsradet.no/nmr/.

Nordunet3

Nordunet3 is a further development of the Nordunet2 research programme on advanced Internet applications. Research is being carried out on the basic infrastructure of the knowledge society in the fields of virtual universities, digital libraries, digital administration, tele-medicine, etc. IT security is seen as a general prerequisite for further development of the Internet, in particular advanced public Internet applications.

More information is available at www.norden.org – choose "Co-operation" and "IT."

Nordic Arctic Research programme (NARP)

The aim of the programme is to enhance Nordic competence and research co-operation in three priority

areas: Natural Processes – Land, Sea and Atmosphere; Biological Diversity and Environmental Threats in the Arctic; and Living Conditions of the Inhabitants of the Arctic.

The last year of the budget period was 2003 and the projects that have been granted funds during the programme period will be concluded during 2004.

More information is available at www.thule.oulu.fi.

Nordic Security Policy Research Programme

The programme has served as a forum and network for Nordic security policy researchers. The last year of the budget period was 2003 and the projects that have been granted funds during the programme period will be concluded during 2004.

More information is available at www.nnss.org.

Institutions

The idea behind the Nordic research institutions is to enable and ensure close co-operation with other knowledge environments and institutions in their respective fields in the Nordic countries and internationally. They will also bring competence and knowledge to the Nordic countries, which will provide added value compared with national institutions.

Following an investigation into the conditions for the Nordic institutions in the field of education and research, the ministers for education and research decided that the Nordic institutions in this field should be transferred to the national sphere of responsibility.

The Nordic Institute for Theoretical Physics (NORDITA)

NORDITA's task is to carry out basic research within the areas of theoretical physics and to promote research and education activities in the Nordic countries, for example, through mobility programmes. The

institute trains PhD students and runs a scholarship programme for young Nordic researchers. NORDITA supports the development of new research areas in the Nordic countries and promotes application of theoretical physics methods in other fields of importance to society.

More information is available at www.nordita.dk.

The Nordic Institute of Asian Studies (NIAS)

The main task of NIAS is to promote and develop Nordic co-operation in research and studies in and on Asia. The purpose of NIAS is to optimise, through joint Nordic efforts, the use of research facilities and competence on Asia and to be a resource centre for activities that would otherwise not exist in the Nordic countries. Another task of NIAS's is to make Nordic research and researcher training on Asia more competitive in an international context.

From January 1, 2005, NIAS will be transferred from Nordic to national responsibility. Copenhagen University, the Copenhagen Business School and Lund University will jointly assume this responsibility. Copenhagen University will serve as NIAS's host institution.

More information is available at www.nias.ku.dk.

The Nordic Sami Institute (NSI)

The aim of NSI is to strengthen and develop the Saami language, culture and social life from an all-Sami transnational perspective. The Nordic Sami Institute will be organised as an independent unit of the Sami University College. The Institute gives priority to projects in the research fields of society, language and legal rights.

More information is available at www.nsi.no.

The Nordic Volcanological Institute (NORDVULK)

Nordvulk is a Nordic centre of competence for research into geodynamic processes, with the focus on volcanology and the continental shift and related environmental issues. In this context, Iceland is used as a geological laboratory for all the Nordic countries. NORDVULK runs a scholarship programme that is offered annually to five young Nordic researchers.

NORDVULK and the geoscientific department of the Natural Sciences Institute of the University of Iceland were merged on July 1, 2004, to form the Iceland University Geoscientific Institute.

More information is available at www.norvol.hi.is.

The Scandinavian Institute of Maritime Law (NIFS)

The task of NIFS is to promote research and education in the Nordic countries in the fields of maritime law, general transport law, petroleum and gas law and related fields. NIFS is an independent unit at Oslo University and should function as an international centre of competence in its field.

More information is available at www.jus.uio.no/nifs.

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