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SECTOR PROGRAMME

# Co-operation on Education and Research

The Danish Presidency  
of the Nordic Council of Ministers 2010



**Sector Programme: Co-operation on Education and Research**  
The Danish Presidency of the Nordic Council of Ministers 2010

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**Nordic Council of Ministers**

Store Strandstræde 18

1255 Copenhagen K

Telephone (+45) 3396 0400

Fax (+45) 3311 1870

**Nordic Council**

Store Strandstræde 18

1255 Copenhagen K

Telephone (+45) 3396 0200

Fax (+45) 3396 0202

[www.norden.org](http://www.norden.org)

**Nordic Co-operation**

Nordic co-operation is one of the most comprehensive forms of regional co-operation. It involves Denmark, Finland, Iceland, Norway and Sweden, as well as the autonomous areas: the Faroe Islands, Greenland and Åland.

Nordic co-operation has political, financial and cultural roots and is an important partner in European and international co-operation. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation aims to strengthen Nordic and regional interests and values in our global surroundings. The countries' common values help to strengthen the Nordic position as one of the world's most innovative and competitive regions.

## **Sector Programme Co-operation on Education and Research**

The Danish Presidency of the  
Nordic Council of Ministers 2010

**The Nordic Region as an education  
and research area focusing on  
language, talent and creativity**

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## Foreword

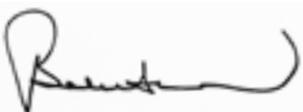
During its Presidency of the Nordic Council of Ministers in 2010, Denmark will focus on the Nordic Region as an education and research region, with a particular focus on language, talent and creativity. The Sector Programme for Education and Research builds on the Danish Presidency's programme for 2010, entitled "The Nordic Region pointing the way forward".

As the internationalisation process continues, education and research are increasingly influenced by the interplay between national and international bodies. We are convinced that by working together to develop and raise the profile of Nordic positions of strength in education and research, we can make greater progress than we are able to achieve as individual countries. Our linguistic and cultural community constitutes a unique strength that must be preserved, and which forms the basis for Nordic co-operation both in the Region itself and in international forums.

All talents must be developed and creativity must be stimulated. The education system needs to create good opportunities for all potential students, but special challenges must be available to the most diligent and talented. In principle, talent must be developed in all subjects, from primary school to university. A particular challenge for the Nordic countries is to have more children and young people to take an interest in natural science and go on to choose a career in this field. Denmark will host a conference to focus on the interplay between talent and creativity in natural science.

There is international interest in the high quality of Nordic higher education and research. Higher education and research must be highly transparent if they are to be globally competitive. Denmark will therefore host a conference to discuss how best to promote positions of strength in Nordic Higher Education and research and raise their profile in international comparisons.

In the aftermath of the international financial crisis, the individual Nordic countries will face major challenges over the next few years. Education and research are important areas for adapting our society to these new challenges. It is therefore suggested at several points in the sector programme that the Nordic countries should exchange information, examples and experiences that may lead to joint regional initiatives or provide inspiration to their Nordic neighbours.



*Bertel Haarder*  
Minister for Education



*Helge Sander*  
Minister for Science

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## **The Nordic Region as an education and research area focusing on language, talent and creativity**

### **Introduction**

The Nordic countries and their welfare models have many features in common. All of the Nordic education systems, from primary school to university level, share the same priorities – i.e. achieving high academic standards and equipping young people with academic and personal skills that meet the demands of the global market. In a globalised world, the interaction between education, innovation and research is more important than ever before, especially when it comes to providing opportunities to maintain high levels of welfare. The objective in the Nordic countries is that more young people should complete further and higher education.

The financial crisis has had a major impact on employment in the Nordic countries. Large numbers of people with little or no formal education and training have lost their jobs and many newly qualified people – especially those with a higher education – are finding it difficult to gain a foothold on the labour market. A systematic exchange of experiences about how the Nordic countries' education systems, individually and collectively, can help get the unemployed back to work will be useful.

Denmark will continue its work on education and research in order – at the end of its Presidency – to present a new strategy for the Nordic Council of Ministers for Education (NM-E) 2011–2013.

Similarly, during its Presidency, Denmark will continue to pursue joint Nordic partnerships as part of the globalisation process initiated by the Nordic Prime Ministers in summer 2007.

Denmark will monitor and contribute to the joint Nordic co-operation to implement the Top-Level Research Initiative (TRI), and will focus on the project's role in the development of the Nordic Research and Innovation Area (NORIA). The Presidency will also continue the work on implementing the other globalisation projects for which NM-E is responsible, i.e. "Promoting higher education in the Nordic Region", "Adequate teaching for young people and adults", eScience, Health and Welfare.

## **The Nordic Region as a linguistic community**

Nordic co-operation is to a large extent based on a cultural community in which language is absolutely central. At the same time, globalisation places ever-greater demands on foreign language skills. In addition to boosting their understanding of neighbouring languages, all of the Nordic countries need to promote a broader foreign language foundation in primary, secondary and higher education.

The Danish Presidency will:

- hold an informal conference of ministers on the theme of languages.
- launch initiatives that follow up on the work of the Nordic Language Declaration, including a language campaign aimed at raising the profile of the Nordic language and culture community, the aim of which is to increase interest in Scandinavian languages among children, young people and – especially – teachers.

## **The Nordic Region as an education region – challenging talents and increasing visibility**

In recent years, both in the Nordic countries and at European level, work has been done to build bigger and stronger educational institutions that will be able to cope with the major challenges that will face the education system over the coming year.

In Denmark, vocational further education programmes have been combined in larger and stronger academic environments, with more than 100 sites and 60,000 students grouped into eight University Colleges. In addition, nine vocational academies, two engineering colleges and a journalism and media school were set up. The purpose of the new institutions is to strengthen the technical and mercantile growth layer, and ensure sustainable administrative units and develop professional bachelor programmes to meet the challenges of tomorrow's global job market.

For several years, Denmark has also worked to create fewer but bigger, stronger and more competitive universities. The number of universities has been reduced from 12 to eight, and their management has been professionalised. At the same time, the universities and the Danish government have been engaged in a dialogue about the extent of autonomy at the universities. The Nordic countries can jointly benefit from exchanging experiences on this issue.

If the Nordic countries are to compete in a globalised world, it is crucial that high-quality higher education is available for all students, and that resources are allocated to the most talented students. During its Presidency, Denmark will focus on how the Nordic Region creates positive environments for the brightest and most talented pupils, students and researchers.

When the economy recovers from the financial crisis, the Nordic countries will be left with relatively few people of working age. The collective challenges will therefore be:

- to promote the flexibility and high quality of the Nordic educational systems.
- to improve student mobility across borders.
- to attract and retain highly educated workers in the Nordic countries' areas of business growth.
- to work to ensure that workers, through regular training and lifelong learning, continue to possess the skills demanded by business.

The main purpose of the largest of the Nordic Council of Ministers' programmes, the Nordplus Framework Programme, is to provide support for Nordic co-operation on education. After a running-in period of two years, an evaluation of the Programme and the administration thereof will be conducted in 2010. As a result, it will be possible during the Danish Presidency to prepare a decision on the possible extension of the programme through 2012–2015.

The Nordic countries prioritise high quality at all levels of education – from primary to university. All countries also emphasise the importance of a coherent, flexible education system that allows students to switch tracks, both vertically and horizontally. Finally, the countries place weight on the results obtained by education research being disseminated to relevant parts of the sector, so that they can be used in education policy and practical work to improve the quality of education programmes, and thereby ensure that more students complete their education. The Danish Presidency will therefore launch a process aimed at educational research and the communication of the results. The development of new methods of interaction between research, education and practice will in future be given a central role in Nordic co-operation.

### *The practical arts in municipal primary and lower-secondary schools*

Globalisation presents special challenges with reference to maintaining competitiveness and prosperity levels in the Nordic countries. Schools can help to address these challenges by, for example, teaching pupils to be creative, independent and responsible citizens. Here, the schools' teaching of practical arts can play a central role. In recent years there has been a greater focus on the importance of practical arts, and the Danish government has launched an action plan to strengthen these subjects.

The practical arts both have intrinsic value and equip pupils with essential skills. The subjects also contribute to students' general education and are applicable in the teaching of other subjects. The results of the Icelandic Presidency's study and subsequent expert meeting on the role of art education in the Nordic school systems will also be included in future work.

The Danish Presidency will:

- conduct an analysis of the practical arts, including the content of the curricula for these subjects in the Nordic countries.
- assess how practical arts education is applicable in other disciplines, and in that context consider whether there are experiences and good examples that could usefully be shared among the Nordic countries.

### *Special-needs teaching*

The Nordic welfare states offer all children and youngsters an education. Children with special needs can receive support so that they too are able to complete schooling and education/training. However, studies reveal differences in terms of concept, extent and content between the Nordic countries' special-needs teaching in primary schools.

The Danish Presidency will:

- conduct a comparative analysis of the Nordic countries' special-needs teaching and support provisions for children in primary schools.
- on the basis of the results of this analysis, hold a conference to identify and develop models that promote efficient use of resources and greater educational benefits.

### *Youth education*

The globalisation project “Adequate teaching for young people and adults” includes initiatives specifically targeted at secondary schools.

One objective for the Nordic countries is that more young people should complete youth education and higher education. At the same time, the Nordic countries face a common problem, i.e. too many students fail to complete youth education. Pupils’ interest in and ability to complete youth education must be encouraged. In December 2009, the globalisation initiative will complete a study that provides an overview of research on drop-out rates in the Nordic countries’ education systems. The study will also map out key policy initiatives to reduce drop-out rates, and identify the most successful interventions.

It is important that youth education is organised in a way that ensures that those who complete the programmes possess the skills demanded by business.

The Danish Presidency will:

- exchange experiences on previously implemented initiatives and, in light of the completed study’s findings and recommendations, develop specific initiatives that have been shown to help reduce drop-out rates on youth education programmes.
- continue work on the Nordic project on the relationship between future skills needs and the content and structure of vocational training programmes.

### *Recognition of vocational qualifications in the Nordic Region*

Formalised co-operation is underway in the higher education sector on the recognition of foreign qualifications, in the form of the NORRIC-network. Similar co-operation and experience exchange on vocational training between relevant parties in the Nordic countries will help the recognition of foreign vocational qualifications, and will also contribute to breaking down barriers to mobility in the Nordic labour market. The Nordic countries’ work on developing and implementing national qualifications is based on the European Qualifications Framework (EQF), which will contribute to the mutual recognition of vocational qualifications.



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The Danish Presidency will:

- work towards collaboration between the Nordic countries to establish a knowledge and resource network, followed by formal Nordic co-operation on the recognition of vocational qualifications.

#### *Vocational bachelor programmes*

In recent years, the Nordic countries' welfare systems have come under pressure, as the number of young people on traditional training programmes in the sector (e.g. nursing, social work, child-care and teacher training) has fallen short of the expected demand. A new globalisation initiative for 2010 identifies the importance of inter-sectoral work in health and welfare, e.g. by developing new skills within welfare education/training programmes. In order to increase interest in traditional and possibly also new welfare education/training programmes, Denmark will investigate opportunities for enhanced Nordic co-operation in this area.

The Danish Presidency will:

- explore possibilities for enhanced Nordic co-operation on vocational bachelor programmes in the welfare sector.

#### *University programmes*

The Nordic Region has a long tradition of students being able to take all or part of their study programme at universities in other Nordic countries. In a globalised world, competition between universities extends beyond the borders of the Nordic Region. The Nordic countries therefore ought to work together in the future to offer students the best possible education. It is also important to invest in ongoing interaction between research, education and innovation.

As internationalisation gathers pace and the number of students taking part of their study programme at one or more universities abroad increases, it is becoming important to focus on how our national education rules and quality-assurance systems can be made to harmonise flexibly with the rules and systems of other countries, without having to compromise on important joint Nordic principles – e.g. equal access to education and high-quality education programmes.

The Danish Presidency will:

- draw upon practical experiences of co-operation on the joint Nordic Masters Programme to focus on more effective harmonisation of education systems, regulations and quality-assurance systems, both inside and outside the Nordic Region.

#### *Nordic Masters – high-quality Nordic partnerships*

Co-operation on the Nordic Masters Programme must be continued and expanded. These must continue to be high-quality study programmes rooted in strong research environments. This will help to challenge talents and allow for mobility, i.e. students will be able to derive inspiration from different research environments. As a relatively small education area, the Nordic Region is suited to effective co-operation on small subjects, in which both student applications and the number of teachers are limited. In order to build critical mass and increase quality, both in the programmes and in related research environments, the Presidency will work to consolidate the smaller university disciplines in such a way that the Nordic Region can retain those with essential skills.

The Danish Presidency will:

- continue working to expand the Nordic Masters Programme and associated quality-assurance processes.
- work to consolidate the small university disciplines under the auspices of the Nordic Masters.

#### *Nordic positions of strength in global comparisons*

In order to remain competitive in a global higher education and research market, both individual institutions and the Region as a whole must be characterised by a degree of transparency. There is great international demand for high-quality research and higher education. However, in international comparisons it can be difficult to document Nordic strengths in this area and profile the Region as world class. There is therefore an increasing need to improve the visibility of profiles, frameworks and findings. Denmark plans to focus on ranking as an instrument for profiling and marketing Nordic higher education and research. Experience from EU projects will be incorporated into this work.

The Danish Presidency will:

- hold a conference that focuses on profiling Nordic positions of strength in Nordic higher education and research in global comparisons.

### *Lifelong learning, skills enhancement and flexication*

Education does not end when you leave college with a diploma in your hand. Lifelong learning is necessary if we are to succeed in a globalised world. It is also important for students to be able to change direction during a programme if they prefer to follow another path. However, the education systems are still characterised by differences in admission requirements. This makes it difficult to switch studies or profession, as it often prolongs study time. A flexible education system needs to be established that recognises non-formal skills, and provides better opportunities for regular training. The goal is “flexication”, which means flexible, coherent programmes with smooth transitions – both horizontal and vertical – as well as recognition of qualifications and opportunities for mobility between education programmes and between countries. Flexication requires active participation from employers and trade unions.

The Danish Presidency will:

- work to develop effective strategies for adults to continue participation in lifelong learning, including e-learning.
- work to strengthen co-operation between educational institutions and companies, with a view to continuing to be able to guarantee the availability of a competent workforce for the benefit of businesses’ global competitiveness.
- conduct a Nordic mapping exercise of transitions between youth and higher education and across programmes, in order to increase flexibility.

## **The Nordic Region as a research region – all talents in play**

Research and research co-operation increasingly transcend borders, which demands flexible interaction between national and international research agencies. In the Nordic Region, there is a close co-operation in research areas where the Nordic countries have particular strengths. At the same time, there is also a very close co-operation between EU countries. More coherent national, Nordic and EU research priorities are prerequisites for the Nordic countries and the EU being able to function as a research area in the longer term. In this context, it is important to focus on the obstacles that prevent national research councils being able to contribute to both joint Nordic and pan-European research initiatives.

### *Development of Nordic research co-operation*

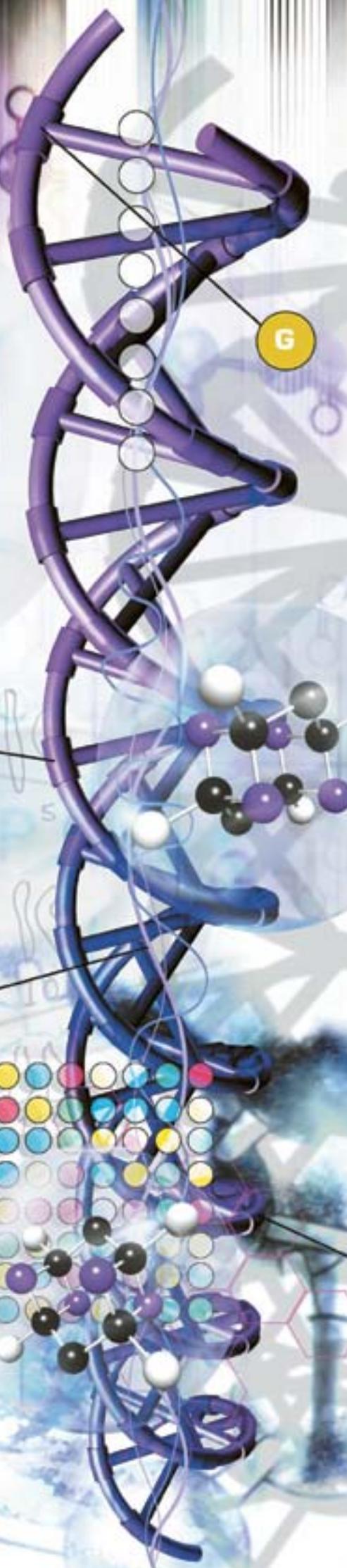
The Nordic countries benefit greatly from co-operation in the research area. In recent years, important initiatives have been taken to further strengthen co-operation and development of the Nordic Research and Innovation Area (NORIA).

Based on experiences from the Top-Level Research Initiative, the focus will be on the issue of governance in effective co-operation on research across borders. It is important for Nordic institutions and the individual countries' research funding agencies to harmonise effectively. This work must be completed and implemented.

The Top-level Research Initiative on climate, environment and energy is the largest joint Nordic research project ever. It is crucial that it is implemented and run in the most efficient manner possible. The TRI is also an essential element in the development of the Nordic Research and Innovation Area (NORIA).

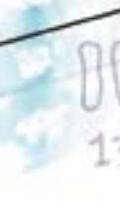
Since spring 2008, the national research and innovation funding bodies in Sweden, Norway, Iceland, Finland, Latvia, Lithuania and Denmark, with support from NordForsk, have been working to establish NORIA networks in various fields, such as LILAN (Living Labs Nordic). The programme's aim is to strengthen the Nordic countries' work on implementing NORIA through research and innovation grants for living labs that involve forums from at least three of the participating countries, working via the ICT infrastructure. The programme also supports research into the living labs concept.

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The Danish Presidency will:

- ensure that the conclusions of the governance project on Nordic research co-operation in association with TRI are incorporated into the countries' and the Nordic Council of Ministers' co-operation practices in the research sector.
- continue working to ensure effective implementation of TRI as a Nordic initiative, including on the European stage.
- proceed with the development of NORIA and prepare the basis for an evaluation of it.

#### *Researcher mobility and careers*

If the Nordic Region is to take full advantage of its talents, efforts must be made to support researcher mobility. Work to identify and remove obstacles to researcher mobility in the Nordic Region will subsequently inspire efforts being made at the European level. At the same time, experience shows that women are reluctant to pursue a career in the world of research. There is therefore a clear need for female role models in this area.

The Danish Presidency will:

- work to identify and address barriers to researcher mobility in the Nordic Region.
- examine, via NordForsk, whether it is appropriate to develop a Nordic research career programme that can provide and promote role models.

#### *Effective dissemination of new knowledge and technology to private companies*

Several institutes in the Nordic countries have for many years facilitated new research-based knowledge and technology and acted as consultants, especially for private enterprises. These include the Technological Institute in Denmark, SINTEF in Norway and VTT in Finland. Interaction between the institutes and the universities has been changing in recent years, due to the increased requirements in relation to internationalisation and co-operation across national borders. Co-ordinated efforts in the Nordic countries are needed to strengthen the technological institutes.

The Danish Presidency will:

- conduct an analysis of the opportunities for closer Nordic co-operation on the technological infrastructure that is made available to each country's business community, including an evaluation of the options for closer co-operation between key stakeholders.
- hold a follow-up conference on the results of the analyses, in order to provide operational and practical proposals for academic and technological priorities that can be combined into joint Nordic positions of strength.

#### *Cross-border innovation networks*

Research and innovation increasingly take place in networks and partnerships between universities, research institutions and private companies. This development can also be seen throughout the Nordic Region, where an ever-greater number of national research and innovation networks are being set up to foster collaboration between research and industry. Several countries already have in place well-developed networks. Companies have a need to compete in the global technology and knowledge market, and to participate in networks and partnerships with companies and scientific institutions in other countries. There is therefore a need to make it easier for companies to find the right networks and partners in the other Nordic countries.

The Danish Presidency will:

- conduct an analysis and create an overview of innovative networks involving research and business/industry in the Nordic countries.

#### *Research infrastructure*

The Danish Presidency will focus on joint Nordic interests in research infrastructure. It would be beneficial to carry out work under Nordic auspices on parts of the infrastructure sector such as uniform rules for storing scientific data; eScience as a Nordic globalisation project; and a joint Nordic evaluation of the memberships of convention-based international infrastructure partnerships. NordForsk's initiative on the joint use of infrastructure and joint participation in international infrastructures is another important element in the continuing work on developing NORIA.

The Danish Presidency will:

- explore the potential for using NordForsk to establish joint Nordic evaluation of participation in international infrastructure partnerships.
- follow up on the final decisions on eScience as a Nordic globalisation project, as per the NordForsk paper of spring 2010.

## The Nordic Region as a creative and innovative region

In order to preserve the Nordic countries' competitiveness, it is necessary to strengthen the creative and innovative skills of its population, as well as to promote co-operation between the Nordic business sector and the countries' research and innovation environments. The focus must be on improving the basis for the active development of innovation capacity in all parts of the Nordic Region, e.g. in order to help improve living conditions in remote areas. Positive framework conditions for science are particularly essential for creative thinking and talent development.

### *Entrepreneurial skills and adult education*

Adult and continuing education in the Nordic countries help to ensure continuous improvement of the workforce's skills – both general and professional. It is also essential that the skills conferred by continuing education promote innovation and development in relation to processes, products and services in all parts of society. The focus of skills enhancement must be on strengthening the basis for actively developing the Nordic innovation capacity.

In connection with the co-operation on the EU's Baltic Sea Strategy, the Nordic representatives emphasised the particular challenges relating to entrepreneurship in the Region. Denmark is responsible for ongoing work on the theme "Promote young entrepreneurs".

In 2010, as part of the globalisation initiative "Adequate teaching for young people and adults", a Nordic comparative study on creativity, innovation and entrepreneurship in education programmes, will be implemented. Further work will be done in this area based on the study's findings and recommendations. Among other things, a joint Nordic summer school on entrepreneurship, with space for 250 youngsters, has been held every year since 2007.

The Danish Presidency will:

- with expert assistance, produce a discussion paper and an action plan for strengthening innovative skills in adult education programmes in the Nordic Region.
- build on the Nordic Council of Ministers' previous initiatives related to entrepreneurship, and run a summer school on Danish soil in 2010.

### *Talent development and creativity in science*

Following on from the Swedish and Icelandic presidencies' focus on creativity, the Danish Presidency will focus on talent development and creativity in natural science.

Several of the Nordic countries face a common challenge in the form of a relatively low interest in science and technology among children and young people. As a result, national strategies have been launched and talent competitions have been run at national and international level. The aim is to promote interest in science and technology by conveying to children and young people that science is a creative process that often transcends traditional academic disciplines. Recruitment to science programmes must be improved, and more students must complete programmes. New combination programmes will ensure a better match between young people's interests and the market's needs.

Danish science must be able to attract and retain the very best of both Danish and international research talent. This requires a strong scientific foundation based on good framework conditions, both financial and physical, which enhance opportunities for international collaboration. Research environments must be able to actively participate in the international division of responsibilities by constructing major new research infrastructure.

The Danish Presidency will:

- conduct a mapping exercise of the Nordic countries' work on talent development and creativity in relation to science.
- hold a conference at the newly inaugurated Mærsk McKinney Møller Knowledge Centre in Sorø. The conference will involve several Nordic countries' resource, knowledge and talent centres for science. Joint Nordic initiatives to promote talent and creativity in education and research in science will be discussed.

### *The Nordic Region – a sustainable region*

The Nordic countries' work on the 2008 Strategy for Sustainable Development also affects the education and research sector.

The Danish Presidency will use the UN climate summit in Copenhagen in December 2009 as launch pad for further work on including the climate and sustainable development in education programmes. Nordic Climate Day 2009 has already played a role in this context. The ongoing work will

concentrate on quality in education programmes, and on exploiting the link between formal education systems and informal learning.

The Danish Presidency will:

- organise a Nordic conference to exchange experiences on practical ways of integrating sustainable development into educational programmes at all levels.

### *Outlying districts*

The outlying districts present special challenges when it comes to education, innovation and employment. Globalisation gives rise to problems related to population retention and employment in peripheral areas, and therefore also affects Nordic regional policy related to social welfare and development.

The Danish Presidency will:

- via the Nordic Children's and Youth Committee, work to strengthen democracy and participation in outlying districts.
- work on development potential, which will help attract and retain young people and entrepreneurs, in order to create more favourable living conditions in outlying districts.



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Nordic Council of Ministers

Store Strandstræde 18  
DK-1255 Copenhagen K  
[www.norden.org](http://www.norden.org)

[norden2010.dk](http://norden2010.dk)

**Ministry of Science**

Bredgade 43  
DK 1260 København K  
Telephone: +45 3392 9700

**Ministry of Education**

Frederiksholms Kanal 21  
DK 1220 København K  
Telephone: +45 3392 5000

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