



Safeguarding genetic diversity in the Nordic region



Nordic Council of Ministers
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Nordic co-operation on genetic resources

The genetic resources in the Nordic region are of great value, both in cultural and economic terms; in many cases they are unique. The plants and animals that endure the Nordic climate form part of the common Nordic cultural heritage and are an indispensable part of the Nordic identity. The genetic resources have been – and still are – a requirement for improving agriculture and forestry and for achieving food security and safety, and further are necessary to preserve the cultivated landscape and protect the environment.

The Nordic countries are working together with a view of fulfilling our present obligations to protect our genetic resources for future generations of the Nordic countries and to the international community. This is done to conserve the genetic diversity of significance to Nordic agriculture and forestry and to preserve our cultural heritage for use as the basis for long-term sustainability.

The Nordic Council of Ministers has now for more than two decades given high political priority to the issue of genetic resources. In 2003 the Nordic Council of Ministers responsible for fisheries, agriculture, forestry, food and environment, respectively, agreed upon a declaration and recommendations on access and rights to genetic resources in the Nordic Countries. The Ministers' declarations represent an important standpoint, which hopefully will serve as a source of inspiration for the activities in other countries and regions regarding this issue.

The overall Nordic goals as regards biodiversity and genetic resources are carried out within the framework of the Nordic Strategy for Sustainable Development as well as the implementation of specific strategies for the environment and agriculture and forestry sectors. Further, a specific Nordic Strategy for the Conservation of Genetic Resources was adopted in 2001. The first evaluation and revision of the Nordic collaborative efforts on genetic resources conservation and management will be carried out during spring 2004.

The Convention on Biological Diversity and the International Treaty for Plant Genetic Resources for Food and Agriculture defines the responsibility for conservation of genetic resources vis-à-vis the international community and future generations. In Nordic co-operation, this obligation has been met through the activities of the Nordic Gene Bank, the Nordic Gene Bank for Farm Animals and network co-operation on forest tree genetic resources within the framework of Nordic Forest Research Co-operation Committee and the Nordic Council on Forest Seeds and Plants. In 2001, a Nordic Genetic Resources Council was established to act as an advisory body to the Nordic Council of Ministers.

Plant Genetic Resources for food and agriculture

Plant genetic resources for food and agriculture are living material containing the genes of immediate or potential value for humanity through crop improvement. These resources thus comprise all our cultivated plants, together with a large number of their wild relatives. These latter often have valuable characteristics that can be used in plant breeding. New technologies, such as molecular techniques and genetic engineering, have expanded the pool of genetic resources now available for crop improvement.

The Nordic countries have joined forces to conserve the biological cultural heritage of the region. In 1979 the Nordic Gene Bank was established as an institution under the Nordic Council of Ministers and forms the core of Nordic co-operation on plant genetic resources. It is a centre for the conservation, characterization and utilization of plant genetic resources in the Nordic countries

The Nordic Gene Bank will celebrate its 25 anniversary in 2004 and can be considered a flagship of the well-functioning Nordic co-operation in the field of biodiversity, genetic resources and Nordic cultural heritage. The Nordic Gene Bank has over the years obtained an even more important role in common management of domesticated plant genetic resources in the Nordic countries.

The Nordic Gene Bank conserves and documents the genetic variation in Nordic material from plant species useful for agriculture and horticulture. The material stored in the bank is available for plant breeding, research and any other bona fide use. Its activities also foster rational co-operation between the Nordic countries in their efforts to use plant genetic resources for plant breeding and crop improvement research. The Nordic Gene Bank participates in international co-operation in the conservation and use of plant genetic resources. It is available, when needed, to serve as a technical advisor for the Nordic countries in connection with international negotiations.

In addition NGB stimulates Nordic co-operation within the field of genetic resources, both by means of studies to establish what possibilities there are for co-operation and by directly supporting Nordic co-operation projects. The institution conserves plant genetic resources from all the Nordic countries. Since the countries have refrained from building up their own seed storages and documentation systems, a multiplication of effort has been avoided and a great saving of resources resulted from this cooperation. NGB's organizational structure and form of work has created a model that has attracted international attention and has served as a design for other regions.

The Nordic Gene Bank has a seed store containing approximately 32,000 seed samples. About 7,000 of these are breeding varieties, old landraces and wild populations of cultivated crops that have been collected over the years in the Nordic countries. In order to minimise the risk of losing material, NGB has established a safety base collection in the permafrost of the Svalbard Islands.





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Photo: Liv Lonne Dille

Farm Animal Genetic Resources

Breeding activities in agriculture over the last 40 to 50 years have contributed to a substantial improvement of productivity. In the past, it was quite common for every region, even every village, to have its own breeds or varieties adapted to local conditions. Today, modern agriculture has led to a situation whereby the standardized, high-performance breeds are the norm. It is crucial important to protect and conserve the genetic properties of national breeds. Also the breeds that are used in agricultural production today must be safeguarded as their numbers are dwindling.

The national breeds of farm animals are part of our common cultural heritage and a vital basis for future agriculture and for providing coming generations with renewed options. If they are not used in production for a certain length of time, farm animal breeds risk extinction – unless support is provided for the preservation and management of these valuable genetic resources. Such work is still often based on the commitment of individuals, however, it is important to actively contribute to securing present and future needs. Thus, it may prove crucial for future ethical commitments, scientific requirements as well as ecological and economic development.

With increasing focus on food safety in the Nordic countries, farm animal genetic resources are of a fundamental importance, since about 40 % of our food's calorie contents originate from animal products. Through long-term, sustainable breeding programmes, it will be possible to breed healthy animals, avoid negative genetic effects and breed animals that tolerate certain diseases. An important issue for future consumers will be the access to food from healthy animals, raised in accordance with animal welfare and ethical considerations. Genetic improvement accounts for about 50 % of the total increase of farm animal productivity, and it is therefore also vital that we secure the existing genetic resources for future use.

Nordic Gene Bank Farm Animals (NGH) was established in 1984, and is a permanent body under the Nordic Council of Ministers. Nordic Gene Bank Farm Animals aims to act as a centre of information and expertise for value creation based on the sustainable development and conservation of farm animal genetic resources. Today the Nordic Gene Bank Farm Animals is a common Nordic cooperating partner for breeding and genetic conservation organisations, enabling the promotion of sustainable development and adequate management of farm animal genetic resources.

Wild Genetic Resources

The Nordic region has many values in the fields of biodiversity, natural and man-made landscapes, including unique costal landscapes, whose splendour can be enjoyed. Large tracts of the Nordic Region hold invaluable treasures in terms of biodiversity, natural and man-made landscapes whose splendour can be enjoyed, and unique costal landscapes. Biological diversity encompasses all species linked to nature – both in natural ecosystems and in more culturally determined ecological systems. This means that protection of biodiversity is tantamount to protecting everything from genetic resources to entire ecosystems.

A number of international agreements establish the framework for efforts to promote biodiversity and natural and cultural environment. The Convention on Biological Diversity is naturally of special interest to biodiversity and genetic resources, since it specifies the sovereign rights to genetic resources as a right for the countries to require giving their Prior Informed Consent before having access to genetic resources. The Convention on Biological Diversity specifies that this is an optional right of the countries, “unless otherwise determined”.

Within the Nordic Council of Ministers a project group dealing with access and rights to genetic resources has analyzed the status and trends regarding rights and access to wild genetic resources in the Nordic countries. The Nordic countries have not implemented any relevant domestic legislation regulating access to genetic resources. Denmark and Sweden have officially determined that for the time being, they do not intend to require a prior informed consent for access to wild genetic resources. Neither has the legal status of wild genetic resources been determined in any of the Nordic countries.

It is clear that because the Nordic countries have divergent opinions regarding the need for regulating access to wild genetic resources and that the issue is under debate in some of the Nordic countries, there is a need to further investigate this issue.

The Nordic Council of Ministers has therefore recommended that the Nordic countries establish the legal status of their wild genetic resources and that the Nordic countries consider the need to provide an overview of the benefits of wild genetic resources.



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Photo: Liv Lonne Dille

Forest Tree Genetic Resources

Forestry is of great importance to the countries in the Nordic Region. Nordic Council of Ministers programmes contribute to the socially, economically and ecologically responsible management and utilisation of forests and timber resources in the Nordic region.

Forestry affects the structure of wooded landscapes and biodiversity, for example by the construction of roads, trenches, earth treatment and the introduction of non-indigenous varieties. Approximately half of the threatened and vulnerable species in the Nordic region live in forests and woods. Therefore, it is a major challenge to operate forestry in such a way as to protect biodiversity and genetic resources and to provide protection to especially valuable areas.

Within Nordic cooperation the forest tree genetic resources are managed by two organizational bodies; the Nordic Council for Forest Reproductive Material (NSFP) and the Nordic Forest Research Co-operation Committee (SNS).

The Nordic Council for Forest Reproductive Material (NSFP) is a permanent body under the Nordic Council of Ministers and has supported, and distributed information on research and development in the forestry seed and seedling sector since 1970. The activities of NSFP cover both practical and administrative aspects of seed and seedling availability, research, genetics, breeding and gene resource management. NSFP has intensified its activities in gene resource sector by the establishment of the Nordic Network for Forest Tree Gene Conservation in 2003. The network facilitates the exchange of ideas and information on forest gene resources among Nordic countries. It aims to provide synergy benefits from joint education initiatives, shared innovation and also possibly from practical gene conservation projects. The network should raise the awareness of politicians, foresters and the public on the gene resources of forest trees.

The Nordic Forest Research Co-operation Committee (SNS) primarily promotes research into the diverse functions of the forests in sustainable forestry, as well as advises the Nordic Council of Ministers on questions concerning forests and forestry research. Areas of responsibility encompass forestry, forests and other wooded areas (wooded landscapes, parks, urban trees and marginal land), the utilisation of wood and other forest products, as well as the non-commercial value of the forests. One of the 15 SNS research networks groups deals with the research on management of gene resources of forest trees.



www.nsfp.net
www.nordicforestresearch.org

Photo: METLA/Erikk Oksanen

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The Nordic countries have a cross-sectoral forum for genetic resources

The Nordic Genetic Resources Council was established in 2001 to serve as a consultative body for the Council of Ministers and the Senior Officials Committee for Agriculture and Forestry and Environmental Issues, respectively, on issues of strategic importance.

The Nordic Genetic Resources Council is a cross-sectoral forum for strategic discussions on genetic resources. Its activities thereby contribute to the implementation of the Nordic Strategy for Sustainable Development and the more specific action plans and strategies of the Council of Ministers' Agriculture and Forestry Division and the Environment Division.

Functions include:

Active evaluation and the submission of proposals to the Nordic Council of Ministers on policy and priorities, specific undertakings needed, budgetary and legal matters, developments in the field, strategic aspects of the work in organizations and networks, especially with regard to in-depth cooperation and integration.

Evaluation of research and development, along with education/training issues related to genetic resources.

Active measures to maintain inter-divisional links, especially with the Industrial/Trade Division and the Research Division.

Serving as a forum for the exchange of information on aid measures.

Serving as an advisory body for the Nordic Council of Ministers and national authorities within the framework of international processes.

Undertaking other assignments for the Council of Ministers and the Nordic Committee of Senior Officials for Agriculture and Forestry Affairs and the Nordic Committee of Senior Officials for Environmental Affairs.

Nordic Co-operation

The Nordic countries have worked closely together on political issues for 50 years. Inter-parliamentary co-operation has been channelled through the Nordic Council, the forum for members of the Nordic parliaments, since 1952. Inter-governmental co-operation has been the remit of the Nordic Council of Ministers since 1971.

The people of the Nordic countries are joined together by language, culture and history. New impulses from within the Nordic countries and from elsewhere influence Nordic identity. The new century and the rapid pace of European co-operation and globalization have thrown up a large number of new challenges.

Nordic Council of Ministers

The Nordic Council of Ministers was established in 1971 and brings together ministers from Denmark, Finland, Iceland, Norway and Sweden, as well as the autonomous territories of Greenland, the Faeroe Islands and Åland. The annual presidency is held in turn by each of the five Nordic countries. In 2004 Iceland will assume chairmanship and in 2005 it is Denmark's turn.

The Nordic Council of Ministers submits proposals on cooperation between the governments of the five Nordic countries to the Nordic Council, implements the Council's recommendations and reports on results, while directing the work carried out in the targeted areas. The Prime Ministers of the five Nordic countries assume overall responsibility for the cooperation measures, which are coordinated by the ministers for cooperation and the Nordic Cooperation committee. The composition of the Council of Ministers varies, depending on the nature of the issue in question.

Nordic Council

The Nordic Council was formed in 1952 to promote cooperation between the Parliaments and governments of Denmark, Iceland, Norway and Sweden. Finland joined in 1955. At the sessions held by the Council, representatives from the Faroe Islands and Greenland form part of the Danish delegation, while Åland is represented on the Finnish delegation. The Council consists of 87 elected members - all of whom are members of parliament. The Nordic Council takes initiatives, acts in a consultative capacity and monitors cooperation measures. The Council operates via its institutions: the Plenary Assembly, the Presidium and standing committees.

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NSFP

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