

**Finland's 3rd National Report to CBD - Additional information concerning forest biodiversity
4 Dec 2006**

**ADDITIONAL INFORMATION FOR THE IN-DEPTH REVIEW OF EXPANDED
PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY**

Note: The Third National Report by FINLAND for the Convention on Biological Diversity was submitted in June 2005. This document introduces the recent development and the related measures of forest biodiversity conservation after the Third National Report.

The revision of Finland's National Forest Programme 2010

The principle of sustainable forest management is integrated into Finnish forest policy and legislation. The cornerstone and strategic foundation of the Finnish forest policy is the National Forest Programme 2010, with the programme period for years 2000-2010. The National Forest Programme 2010 aims at responding to national and international challenges in the forest sector by promoting sustainable management of forests including conservation of biological diversity.

The programme was prepared in an open process involving all relevant stakeholders in forest sector, including representatives of different administrative sectors, the private sector and a large number of other organisations and private citizens. The cooperation has continued in the implementation, follow-up and development of the National Forest Programme (NFP).

The Finnish Government approved the Programme in 1999 and since 2000 it has been implemented as part of the Government Programme. The Ministry of Agriculture and Forestry coordinates the Programme implementation with the help of the Forest Council and its Secretariat and Working Groups. Different administrative sectors, industries, forest owners, nature conservation associations and other non-governmental organisations are represented in the Forest Council. The Programme implementation is funded by the different ministries, forest owners and forest industry, as well as contributions from other private actors.

Forest biodiversity is one of the priority areas in the National Forest Programme. Especially the protection of forests in Southern Finland is identified in NFP as a key priority to enhance forest biodiversity in Finland. In 2002, the Finnish Government made a decision on the Forest Biodiversity Programme for Southern Finland 2003-2007 (METSO). METSO is an extensive and innovative forest conservation project and an operational element of the National Forest Programme for the part of biodiversity.

An interim evaluation of National Forest Programme was conducted in spring 2005. After the evaluation, the revision of the National Forest Programme was started in autumn 2005. The revised programme period will be extended till year 2015. The plan is to finalise the revised NFP so that the Government could adopt it by the end of 2007, when the decisions on the future of the METSO Programme will also be made. According to the interim evaluation, NFP needs to pay more attention to certain ecological measures in the future. Key challenge will be the improvement of nature conservation in Southern Finland. This will be emphasized in the revised National Forest Programme 2015.

Forest Biodiversity Programme for Southern Finland 2003-2007 (METSO)

According to an international evaluation, the basic conservation area network in Finland is good, but it suffers from regional imbalance. Most of the present conservation areas are located on state-owned lands in northern Finland. In southern Finland the need for additional protection is generally recognised.

The Finnish Government made a decision on the Forest Biodiversity Programme for Southern Finland (METSO) in 2002. METSO aims at promoting conservation of forest biodiversity in Southern Finland by combining protection of biodiversity with the commercial use of forests. In the programme new and innovative conservation means have been developed and tested in order to acquire ecologically the most valuable forest sites for temporary protection or permanent conservation. The METSO Programme has contained altogether 17 sub-programmes, which have helped inter alia to widen the conservation area network, improve its quality and increase scientific knowledge on the basics of biodiversity protection.

METSO represents a totally new way of thinking in Finnish forest conservation since all measures are based on voluntariness and the landowner's own willingness to safeguard biodiversity in his/her commercial forests. Financial costs resulting from conservation measures are compensated. With this new approach to conservation, METSO can also be seen as a new, innovative form of environmental and forest policy, which helps Finland in implementing the various international agreements on protection of biodiversity.

The METSO programme has included also extensive research programmes on forest biodiversity aimed at producing scientific knowledge to support the decision making on forest conservation. Three large research programmes have been established to support METSO:

- Forest Biodiversity and Monitoring Programme (MOSSE) is running 2003-2006 and covers research on ecology, economics and social dimensions of biodiversity issues in Finland. The annual budget of MOSSE is about 2.3 million euros totalling close to 10 million euros.
- The PUTTE Programme concentrates on endangered and deficiently known forest species and is running 2003 - 2007. The budget of the programme is about 10 million.
- The third research programme supporting METSO is called TUK. The programme is running 2005-2010 in the Finnish Forest Research Institute and provides information on policy instruments and socio-economic impacts of safeguarding forest biodiversity. Total budget is about 5 million euros.

The METSO Programme started in 2002 and it continues till the end of 2007. Total budget of the Programme is about 60 million euros. The Programme was carefully prepared by a working group led by the Ministry of the Environment and it involved different government sectors and a wide range of stakeholders, such as forest industry, forest owners' organisations and nature conservation organisations. The Ministry of the Environment and the Ministry of Agriculture and Forestry are responsible for the coordination of the Programme.

The evaluation of the Programme has been an integral part of METSO from the beginning and the progress of the Programme has been reported on a regular basis. The final report of the follow-up team of METSO was published in November 2006. According to the evaluation, the METSO

Programme has been successful in developing and testing new conservation means based on voluntary participation. Voluntary means have won wide approval among landowners and the Programme has created a totally new operating culture for forest protection. A representative network of protected forests can only be built up with involvement from all types of forest-owners, particularly including the State, municipalities, forest industry companies and other major owners.

During the METSO Programme altogether 9300 hectares of forest has been protected. Metsähallitus, which is responsible for the use of state-owned forests in Finland, has removed about 5000 hectares from economic use to protection. In private forests the protected area encompasses 4300 hectares, of which 2300 hectares are permanently conserved and 1800 hectares are under temporary protection. Restoration activities are carried out both in forests and on mires and altogether 14500 hectares (8200 hectares of forest and 6300 hectares of mires) have been restored.

Since current measures to safeguard forest biodiversity are not sufficient to preserve forest species and biotopes, there is an obvious need for a new action and financing programme to ensure the protection of forest biodiversity also in the future. The preparation of the programme will be started right away, and it should be submitted to the Government for approval together with the revisions to the National Forest Programme in autumn 2007. The new action and financing programme for forest biodiversity will cover the whole country and it aims at substantial improvement on forest biodiversity in Finland. The annual budget is proposed to be about 65 million euros. The new programme will be based on the findings of the METSO Programme.

Principal results of evaluation are as follows:

- The forest sites now protected through voluntary means generally have high ecological values
- The voluntary means used in the programme have gained widespread acceptance
- Both temporary and permanent forms of voluntary conservation should be further developed and targeted to suitable sites
- The criteria used to select sites and regional objectives has turned out to be successful
- The small sizes of many protected areas and their geographical separation are a problem, especially for many threatened species
- A comprehensive assessment is needed to facilitate the establishment of a more extensive and connected network of protected areas
- The application of natural forest management methods in commercial forests benefits species diversity
- More extension services and public support is needed to promote ecologically beneficial controlled burnings and the preservation of retention trees
- Multiple-objective forest planning can improve ecological impacts cost-effectively in all forests
- Economic incentives are needed to promote extension on biodiversity and multiple-objective forest planning
- Additional protection of few percentage orders of magnitude has had and will have little economic impact on the national economy in the METSO region
- New conservation means worth developing can be devised within local networks, but these models may not be directly applicable elsewhere
- It is important to consider local social and economic impacts in order to improve acceptability

- Close collaboration between forestry and environmental organisations is necessary whenever new measures are to be widely adopted
- Building up co-operation networks and new cultures of voluntary action takes up time and resources

National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity in Finland 2006-2016

Finland has promoted the conservation, management and sustainable use of biodiversity for more than a decade on the basis of the principles defined in the Convention on Biological Diversity. The first National Action Plan for Biodiversity in Finland for 1997–2005 was drawn up by Finland’s national biodiversity committee in 1996-1997. The Action Plan was drafted to fulfil Finland’s obligations under the Convention on Biological Diversity and it covered altogether 124 measures designated to promote the conservation, management and sustainable use of biodiversity.

To support the coming revision of the Action Plan, an evaluation of the impacts of the Action Plan on Biodiversity in Finland was conducted during the years 2004-2005. The evaluation showed, that in spite of reasonable success in the implementation of the Action Plan, the measures within the Action Plan alone will not be sufficient to halt or reverse the ongoing negative trend in biodiversity in Finland. On the basis of the evaluation, the national biodiversity committee is currently finalising new National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity in Finland for 2006-2016. (Since the revision work is still in progress, the following description of the content is not final and may be subject to change.)

According to the vision of the new strategy, in 2010 the decline in biodiversity in Finland has been halted. Stable conditions are maintained in the long term. Biodiversity is protected and used in a sustainable way in Finland due to its irreplaceable conservation values and as a source of human wellbeing.

The objectives of the National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity in Finland 2006-2016 are:

- To halt the decline in biodiversity in Finland by 2010
- To establish favourable development trends in the state of the Finnish natural environment over the period 2010-2016
- To prepare by 2016 for global environmental changes that may threaten the natural environment in Finland, particularly with regard to climate change
- To strengthen Finland's influence in the preservation of biodiversity globally through international co-operation

The protection of forest biodiversity will have a key role in achieving these targets. The strategy states that in spite of positive developments in forest protection, forest species are still increasingly threatened in Finland. However, it's important to bear in mind that many negative trends affecting forest biodiversity have emerged over long periods of time and may still have delayed impacts on biodiversity, even though forestry methods have improved significantly in recent decades.

Expert evaluations suggest that without further measures the number of threatened and extinct forest species may still rise in the near future. Further measures are particularly needed to safeguard

forest biodiversity in Southern Finland. Increasing the amounts of decaying wood is particularly important in order to secure forest biodiversity.

These development needs are taken into account in the New Action Plan for the Conservation and Sustainable Use of Biodiversity in Finland 2006-2016. In the Action Plan a total of 110 specific measures are drawn up to put the strategy into action. In order to halt the decline in forest biodiversity, the Action Plan suggests following actions:

- The revision of Finland's National Forest Programme aims to protect the biological diversity of forests. As set down by Government Resolution, shortcomings regarding forest protection in southern Finland are corrected by the Forest Biodiversity Programme for Southern Finland (METSÖ). The decisions on the further actions on forest biodiversity conservation will be made in 2007 on the basis of the findings in the METSÖ Programme.
- Forest owners are encouraged to treat commercial forests in a way that promotes the preservation and enhancement of structural features of natural forests and valuable forest habitats. Extension services are provided to improve the way in which biological diversity is taken into account in wood harvesting and forest management.
- Impacts of the increased harvesting of energy wood and the harvesting methods on biological diversity are assessed and possible negative impacts are prevented through legislation and extension services.
- Methods for monitoring restoration measures are developed and follow-up networks of restored forests and mires are set up on the protection areas on state lands. Information systems are developed for recording the follow-up data.
- Forest planning and use of recreation areas that support the multiple use of forest are further developed.
- Protection of the biological diversity and sustainable use of forest habitats are promoted in international forest processes.

The new action and financing programme on forest biodiversity will have an essential role in achieving the forest-related targets of the new Biodiversity Action Plan.

A comprehensive international Management Effectiveness Evaluation of the Finnish Protected Area System

An international evaluation of the management effectiveness of the Finnish protected area system was commissioned in 2004 by the Natural Heritage Services (NHS) of Metsähallitus, which is responsible for the management of state-owned protected areas in Finland. The evaluation showed, that Finland's protected areas are in general well managed, and with some exceptions, they appear to be achieving their aims of conserving biodiversity. However, the evaluators gave a number of recommendations for improvements, summed in ten areas of suggested actions. These areas of actions were related to the ecosystem approach; system and site planning; conservation, community and visitor outcomes; financing; the global role of the Finnish protected areas; the assessment of cultural values; and reporting the state of the protected areas.

In 2005 and 2006 the Natural Heritage Services has integrated these recommendations into its annual work plans and will work together with ministries and other organizations in implementing more complex actions suggested. The actions will be included in the new National Biodiversity Action Plan 2006-2016. To facilitate adaptive management, sharing of best practices and harmonisation of protected area management, NHS has re-arranged its organization and strengthened its core processes at the end of 2005. NHS decided to start reporting the state of the protected areas and the first report will be published in 2006. A gap analysis of some 37 threatened and habitat directive species is under preparation. A system to monitor consumption and cost of firewood has created and a pilot project to test it is under way.

As a result of METSO, Metsähallitus has continued restoration activities by restoring about 9000 hectares of former commercial forests in conservation areas in Southern Finland in 2005-2006. Metsähallitus has also removed additional 5000 hectares of forest from economic use to protection. In addition, nature management activities on 300 hectares of deciduous forests have been done. Metsähallitus has also started to use prescribed burning in Northern Finland. These restoration and management activities have immediately increased the amount of dead and decaying wood. Thus, as a result of forest restoration, the amount of suitable habitats for many threatened saproxylic invertebrates species has increased. NHS has also cooperated intensively with Metsähallitus Forestry unit to protect the biodiversity in commercial forests in order to build ecological networks to support the protected areas (Metsähallitus Forestry unit manages state-owned commercial forests in Finland.). The main tool for that has been regional natural resource planning, which Metsähallitus uses to reconcile different forms of land use on state-owned lands.

New management instructions/recommendations for commercial forests

In Finland forest biodiversity is ensured through a sufficient network of conservation areas and by maintaining biodiversity in commercial forests. Since almost 90% of Finland's forests are under commercial use, it is important that the management of commercial forests complies with the aims of biodiversity protection and supports the safeguarding of forest species and biotopes. In its Decision in Principle on the METSO Programme, the Finnish Government recommended that actors in the forest sector should take forest biodiversity better into account in their forest-related activities.

The Finnish forest legislation was thoroughly reformed in the 1990's. Principles of sustainable forest management and biodiversity were written into the Forest Act and the Nature Conservation Act, which set high standards on the protection of forest biodiversity in commercial forests. The Forest Act ensures the protection of ecologically valuable natural forest habitats by prohibiting their deterioration. In practice this means that they must be excluded from forestry measures. The vicinity of springs and other small-scale waterways in forests, for example, are spared from felling. In addition to the Forest Act, the management of commercial forests and the protection of biodiversity are steered by the recommendations for good forest management which advocate an even stricter protection of natural values than that required by law.

The first revised forest management instructions during the METSO Programme were published by Metsähallitus in 2004 to promote forest biodiversity on state-owned lands. Important objective of updating the guidelines were the implementation of new research findings and aligning forestry operations with the goals of the METSO Programme. The guidelines focus on safeguarding biodiversity in commercial forests. Other central topics include landscape management, game issues and conservation of water and soil resources.

Decreasing amounts of decaying wood is one of the major factors that have led to species being threatened in Finnish forests. The guidelines seek to remedy this by sorting the various forest types into different categories according to the desired amount of decaying wood. The targeted amounts of decaying wood are to be reached with trees left standing in felling operations. In special areas of particular ecological importance, the numbers of residual trees aimed for are twice as high as in regular managed forests. Such special areas include, for example, so-called ecological stepping stones and corridors, border zones of small conservation areas in southern Finland, as well as hiking and recreation areas. Close attention is to be paid to the number and quality of residual trees at all felling sites. The revised instructions are highly significant since they influence the treatment of almost five million hectares of state-owned forests.

Also the Forestry Development Centre Tapio has revised its forest management recommendations. The new recommendations were published in August 2006 and they guide all forest management in Finland's private, family-owned forests. Private families own 58% (12.7 million hectares) of Finland's forest area¹.

The objective of the revised recommendations is to safeguard and increase both economic and environmental values of forests. In biodiversity conservation the most important aspects are the retention trees recommended to be left aside and the preservation of valuable habitats. The new guidelines specify clearer than before the targets which are hoped to be achieved with retention trees. The focus is on aspen and other valuable broad-leaves trees, on old and stout trees as well as on diversifying the forest structure. Valuable forest habitats are recommended to be left outside forestry operations.

Conservation of forest genetic diversity

The gene conservation strategy for forest trees and crop plants is defined in a National Plant Genetic Resources Programme (Ministry of Agriculture and Forestry, 2001). The implementation is monitored by an advisory board, which acts as a link between various ministries, participates in the preparation of legislation concerning plant genetic resources and deals with Nordic and international issues related to plant genetic resources. METLA (the Finnish Forest Research Institute) is the organisation responsible for the conservation of forest genetic resources. The main method for the wide-spread species with continuous distribution is conservation through in situ gene reserve forests whereas for rare and scattered species ex situ collections are the predominant method.

Currently there are altogether 42 gene reserve forests in Finland and their combined area is 7000 hectares. As these forest stands are spread over different climate zones, a large range in adaptive traits is included. Gene reserves are mostly selected for conservation of Scots pine (*Pinus sylvestris*), Norway spruce (*Picea abies*), silver birch (*Betula pendula*) and pubescent birch (*Betula pubescens*). During the period 2004-2006 three new gene reserve forest were selected.

Ex situ tree collections have been established for noble hardwoods, namely Norway maple (*Acer platanoides*), common ash (*Fraxinus excelsior*), pedunculate oak (*Quercus robur*), small-leaved lime (*Tilia cordata*), mountain elm (*Ulmus glabra*) and European white elm (*Ulmus laevis*). Material for the collections has been gathered from several (20-90) forest stands per species so that the whole distribution area of the tree species is covered. Altogether these collections contain

¹ All forest areas (total, protected etc.) according to FAO definition

presently 1180 clones or families. During the period 2004-2006 the existing collections were maintained and new material was collected from mountain ash (*Sorbus aucuparia*) and juniper (*Juniperus communis*), to be planted in collections after a period in a nursery.