

# The Finnish Trading in Nature Values Programme

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## Basic facts

Of the land area in Finland (30.4. million hectares), 86% or 26.3 million hectares has classified as forestry land. Actually 20.1 million hectares are suitable for active forestry (forest land).

(Forestry land is divided in three categories according to its productivity: forest land, scrub land and waste land)

There are four forest vegetation zones in Finland: hemi-, south-, mid-, and north-boreal.

Of the total forestry land 52% is under non-industrial, private ownership; the State owns 35% and forest industry companies own 8% (others under municipal, parish, or joint ownership).

State-owned forests are mainly situated in Northern Finland.

In Southern Finland, 72% of forests are owned by private families.

About one in every six Finns is a forest owner (920 000 owners, 440 000 holdings).

Small-scale forestry: average holding size is about 24 hectares.

Certified forestry: 95% of forests PEFC-certified.

Sustainable forestry: annual growth about 100 million m<sup>3</sup> and drain about 70 million m<sup>3</sup>. [total drain: removals (roundwood consumption) + natural drain]

A major part of the pine – and broadleaved – dominated stands are young stands with rapid growth.

Old growth forests are becoming increasingly fragmented patches.

Habitats suited to old growth species severely reduced.

The latest assessment of threatened species in Finland was made over 1997-2000.

Of the total of 43 000 species, 15 000 were known sufficiently to enable the assessment, and 1505 of them were classified as threatened.

Forests are the primary habitat for 43% of the threatened species in Finland.

Broad-leaved forests are important environment for the threatened species. They are mostly located in the southern parts of the country.

The results of the next assessment will be published in 2010.

## Nature conservation; direct regulation (mandatory measures)

In commercial forests, biodiversity is promoted by maintaining valuable habitats, increasing the amount of deadwood and saving large broadleaves in cuttings.

Based on the law the important habitats mentioned in the Forest Law have been preserved as have the biotopes mentioned in the Nature Conservation Law.

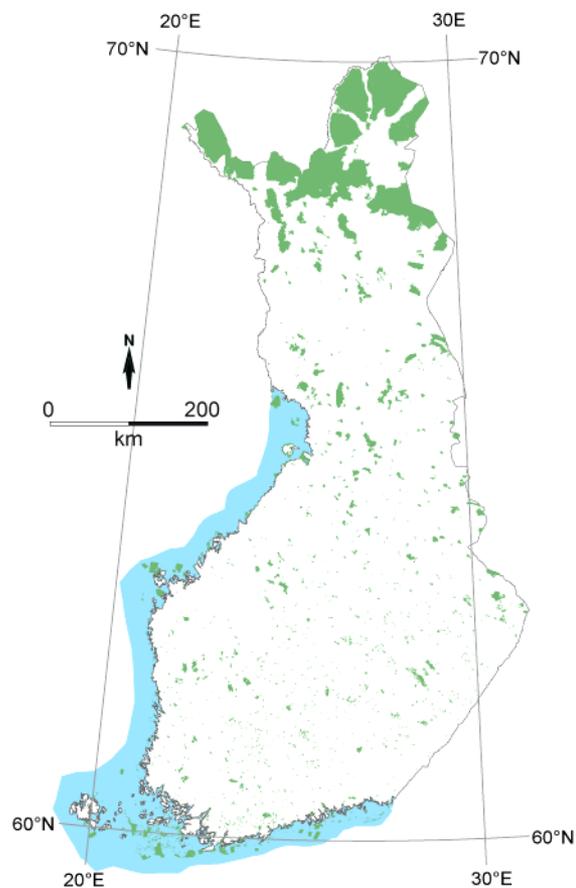
Safeguarding other valuable habitats in forests has been done by reformulating forest management recommendations.

A common approach in nature conservation has been to establish protected areas to already state-owned land or to purchase property rights for areas to be set aside for conservation purposes (land acquisition).

Finnish network of protected areas is based primarily to national conservation programmes (between 1970-1990).

The first national parks were established already in 1938.

# Finnish network of protected areas (2009)



Finnish network of protected areas suffers from regional imbalance.

In the North 16.3% from the forestry land are protected, but in the Southern Finland the figure is 2.7%.

In 2009, the area of statutory nature conservation and wilderness areas on State land was 2.8 million hectares. Conservation areas on private land totaled 0.2 million hectares.

There is a need to extend the conservation network to the southern part of the country and to the private forests.

At the same time the legitimacy of the mandatory state regulations in nature conservation is questioned.

According Ollikainen (2009) mandatory forest conservation:

- Not popular among private nonindustrial landowners
- May cause moral hazard in private forests
- Is very expensive for tax payers

## New policy instruments

The range of methods available for maintaining biodiversity has become more diverse over recent years.

One of the methods applied contains the voluntary participation of forest owners, the compensation to the landowners at the minimum of the lost economic values and protection agreements made for fixed-term periods.

According to the surveys made for citizens and forest owners (Horne et al. 2004 and Horne et al. 2009) the emphasis on voluntariness increase the social acceptability of conservation and thereby reduce the potential for conflicts. Voluntariness was suitable to the conventional values of most forest owners. Temporary agreement for 10-20 years was the most popular conservation mean. The ability to retain one's property rights and sovereignty was of particular importance.

In principle, the incentive-based flexible instruments also give a chance to improve the cost-efficiency of nature conservation.

# METSO I

In 2002, a new forest biodiversity Programme for Southern Finland, called the METSO Programme, was adopted.

The purpose of this Programme in its pilot phase (2003-2007), was e.g. to test new voluntary means for non-industrial, private forest owners to preserve the biodiversity in their forests.

The following measures based on the voluntary actions of forest owners were experimented:

- 1) Trading in nature (natural) values (Nature values trading)
- 2) Competitive tendering (Bidding game)
- 3) Cooperative networks
- 4) Nature management areas in nonindustrial private forests
- 5) Forest Conservation Foundation

The total funding for the pilot phase was 60 million euros.

During it, almost 8000 hectares of forests were protected.

The pilot phase was evaluated in the end of 2006 with a comprehensive assessment of its ecological, social, and economic impacts.

# The Trading in Nature Values (TNV)

The development phase (2001-2002) of this new measure was based on the citizen initiative in the province of Satakunta. This measure was then connected to the METSO-Programme and an experiment project was established (2003-2007) to test the performance of the trading system and to tailor the functioning organisation, rules and practices for it.

The new approach provides forest owners with an alternative and complementary way to earn income from their forests.

# Pilot project the Trading in Nature Values

Local forest centre in Satakunta initiated the TNV pilot project (2003-2007). Annual budget: 0.4 Million €/year.

Landowners were asked to provide stands to the program with associated private bids. Implicit competition among the landowners is taking place.

If the site a landowner offers is deemed valuable enough and fulfills the conservation biological criteria on the basis of information available and collected during a short field survey, the value of the site is calculated with a valuation mechanism (Conservation value mechanism, CVM), which includes prices for different ecological characteristics evaluated by the authority. The government authority uses the conservation value as a guideline in negotiations to compare different offers. This value includes also a capitalized value for the loss of delaying harvesting calculated by using 1% interest rate for the value of the forest and expected decay of wood as well as payment for the ecological values.

Finally, the authority and the landowner negotiate about the amount of compensation and the required protection activities (f.ex. no silvicultural activities are carried out in the forest. In some cases careful cuttings and treatment can be allowed.)

The goals and preferences of a forest owner affect the compensation claim, which depends on a forest owner's preference with respect to nature conservation. Environmentally minded landowners are thought to require lower compensation than those who highly value timber production associated with monetary benefits.

Made 10 years long contracts with private landowners.

According to the contracts, the forest owners conserve their stands for biodiversity and receive compensation, i.e. a rental payment.

Compensation payments are made in one lump sum at the beginning of the contract period and they are exempted from taxes.

After the 10-year period, the landowner is free to choose whether the contract is renewed or not.

Total amount of contracts made: 158 (1193 ha);  
average price, €/ha/year 155.

## METSO II

After the evaluation of the METSO I, the second phase was prepared, and the Government took a decision-in-principle on an action programme for the period 2008-2016.

Government resolution issued March 2008, including decision on funding (182 million € for budget period 2009-2012) and to complete existing nature conservation programmes.

# METSO II Programme elements

1. Ecological site selection criteria; significant wooded habitats, particularly significant structural features
2. Restoration and nature management of habitats in protected areas
3. Development of Finland's network of protected areas
4. Safeguarding biodiversity in privately-owned forests; nature management plans, subsidies for natural values in commercially managed forests, changes in forest legislation
5. Cooperation networks
6. Natural values trading and related cooperation
7. Nature management measures in commercially managed State forests
8. Ensuring biodiversity in municipal recreation forests...  
(total number of elements 12)

# Natural values trading in METSO II

- Cooperation between regional env. centres and forestry centres; annually a joint invitation to tender natural values based on ecological selection criteria; tailormade for each region, intensified marketing for specific conservation needs
- The site selection criteria define what kind of ecologically valuable habitats are to be protected in the programme (they form "an ecological shopping list")
- Protection measures initiated by landowner
- Receiving tenders includes a survey of basic information on the site
- On-the-spot visits; application of ecological criteria; assessment and calculation for sale price or compensation to be paid
- Landowners have opportunities to present their views on compensation or price to be paid
- If agreement, preparation of transaction and/or concluding the contract for establishment of private protected area (permanenet protection) or a contract for a specific time period (forests for temporary conservation).

- Forest owners will be compensated according to the Nature Conservation Act (1096/1996) or the Act of Financing of Sustainable Forestry (1084/1996) in the Finnish legislation.
- Sites are especially favoured where habitats are well preserved in their natural state or could easily be restored, where they host rare or endangered species, and where they are close to protected areas.
- The evaluation is based on ecological criteria and it is performed by an expert on each site. If a site is approved as a METSO target, the forest owner will be compensated for the costs of nature management on the site and for loss of income.

# Site selection criteria

## **Significant wooded habitats for biodiversity include:**

- Herb-rich forests
- Heathland forests with plenty of decaying wood
- Forests adjacent to springs and pools
- Wooded mires and the wooded margins of open mires
- Swampy woodlands and wooded flood meadows
- Sunlit slopes on sandy esker ridges
- Biodiversity sites along emergent coastline
- Wooded heritage biotopes
- Wooded habitats on calcium-rich bedrock and ultra-alkaline soil
- Wooded cliffs, bluffs and boulder fields important for biodiversity

## **Particularly significant structural features, ecological orientations and other habitat features:**

- Decaying wood: decayed fallen trees, dead standing trees, stumps, snags, holed trees, windthrows
- Large, old deciduous trees: aspens, birches, goat willows, rowans
- Trees of southern broad-leaved species
- Burnt wood from large trees
- Features associated with herb-rich woodland, spruce mires, springs, high moisture levels, swampy terrain and fens
- Influence of groundwater or calcium, nutrient-rich bedrock
- Natural or easily restorable hydrological conditions
- Diversity of tree species and ages, openness of the canopy layer

## Voluntary but not spontaneous; some criticism

The instrument used in METSO II differs greatly from the Trading in Natural Values (TNV) instrument used in METSO I.

The forest owner and the authorities do not deliberate with each other about the boundaries of the sites and their prices.

No payments for ecosystem services. An established interpretation of EU regulations is that they do not allow the states to pay rewards (subsidies) of producing nature values in forests (to the forestry sector).

Possibilities for cost-efficiency probably lost?

Moved away from negotiated payments to public subsidies based on values which are based on forest values in wood production (opportunity costs) and on direct costs of nature management).

## Further reading

- Horne, P., Ovaskainen, V. & Koskela, T. 2004. Economic and social implications of incentive based policy mechanisms in biodiversity conservation. Working Papers of the Finnish Forest Research Institute 1.  
<http://www.metla.fi/julkaisut/workingpapers/2004/mwp001.htm>
- Horne, P., Koskela, T., Ovaskainen, V. & Horne, T. (eds.) 2009. Safeguarding forest biodiversity in Finland: Citizens' and nonindustrial forest owners' views. Working Papers of the Finnish Forest Research Institute 119.  
<http://www.metla.fi/julkaisut/workingpapers/2009/mwp119.htm>
- Juutinen, A., Luque, S., Mönkkönen, M., Vainikainen, N. & Tomppo, E. 2008. Cost-effective forest conservation and criteria for potential conservation targets: a Finnish case study. *Environmental Science and Policy* 11:613-626.

- Juutinen, A., Mönkkönen, M. & Ylisirniö, A.-L. 2009. Does a voluntary conservation program result in a representative protected area network? The case of Finnish privately owned forests. *Ecological Economics* 68: 2974-2984.
- Mäntymaa, E., Juutinen, A., Mönkkönen, M. & Svento, R. 2009. Participation and compensation claims in voluntary forest conservation: A case of privately owned forests in Finland. *Forest Policy and Economics* 11: 498-507.
- Mönkkönen, M., Ylisirniö, A.-L. & Hämäläinen, T. 2008. Ecological efficiency of voluntary conservation of boreal-forest biodiversity. *Conservation Biology* 23(2): 339-347.
- Ollikainen, M. 2009. Finnish experience with METSO biodiversity conservation scheme. Paper presented in workshop Market-based Instruments and Payments for Environmental Services in forestry: a real solution? In Barcelona December 17, 2009.

Thank you for your attention!