Policies of Destruction

Analysis on the implementation of the Convention on Biological Diversity in the protection of forest ecosystems in Finland

GREENPEACE

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The report (as a Pdf-file) and more information on Finnish forests also at www.greenpeace.fi/forest

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Foreword

Finland ratified the Convention on Biological Diversity (UNCED 1992) in 1994. The National Environment Programme for Forestry was approved the same year, giving an incentive for a reform of forest legislation. The basis for the reform was to harmonise legislation with the forest principles of the Convention on Biological Diversity (CBD), and the general principles of the 1993 Helsinki Ministerial Conference on the Protection of Forests. The reformed forest legislation includes the new Forest and Nature Conservation Acts that came into force in January 1997.

The Environmental Programme, new forest legislation and new forest management recommendations strive to define rules for sustainable forestry in Finland. Steps have been taken to promote the preservation of biodiversity in forests, but it seems evident that these steps are insufficient under the simultaneous pressure of increasing forest use. Biodiversity issues are still looked at as separate problems, rather than a part of all policy decisions on the use of natural resources.

Protection measures have been strongly limited by economic demands and, in state forests, by profit targets that inhibit planning of reserve networks based on ecological grounds. Logging of high conservation value forests is allowed to continue despite strong scientific evidence against it. In Finland, "sustainability" of forestry still implies, first and foremost, sustainability in the supply of timber to the industry.

Finland has a National Commission for Biological Diversity and a related evaluation working group with wide participation, being able to affect national communications on the implementation of the CBD. These transparent practices do not apply to forest policy. Finland's thematic report on the protection of forest ecosystems under the CBD was prepared in the Ministry of Agriculture and Forestry with no possibilities for NGOs or environmental authorities to affect its contents. This reflects the generally irregular treatment of forest biodiversity issues in Finland, as they are increasingly frequently processed through the Ministry of Agriculture and Forestry rather than the Ministry of Environment. The Ministry of Agriculture and Forestry, in turn, sees as its most important task to promote the interests of the forest industry. The current minister has stated that his "task is to ensure the competitive ability of the forest industry, even if it implies a conflict with biodiversity matters"(1). The problems of the national communications and follow-up reports as indicators of the progress made in the implementation of the CBD lie in their fundamental character. In the case of Finland, they are used solely as advertising brochures to the international community. National communications are lists containing a compilation of all possible conservation programmes, lacking attempts at analytical survey or criticism. They contain more words than action, more theory than practice, more targets than achievements and more planning than implementation. This is only natural: it is clear that all state authorities want to give the best possible impression of their policies. However, this is not the best policy for the CBD or for biodiversity.

With this report we want to stress how important it is to demand that national communications be critical and analytical status reports. They should have a true role in steering the implementation of the CBD and their findings should be used to adjust activities in order to achieve targets. Now they are mere chronicles, lists of good deeds, and obscure more than they reveal. Most importantly, national communications should be analytically reviewed by an impartial party to ensure that the implementation of the CBD proceeds as it should.

At present, it is necessary that national communications are complemented by critical NGO reports, reminding the world of reality: in Finland, despite first-class reports and communications, the loss of biodiversity is still continuing. There is an enormous gap between slick and polished reports and the reality in the forests. We hope that the example of this report will help the international community to realise that it is of utmost importance that thorough mechanisms are developed to monitor the implementation of the CBD. Otherwise, we fear, the CBD will have its greatest effects on paper.

Authors

1. Finnish forests

Three fourths of Finland is covered by forest, and forests are the primary habitat of almost half of the country's species diversity. Almost 1000 forest species are red-listed, and more are feared to face extinction unless the degradation of forest habitats is stopped.

1.1. Forest management

Finnish forestry is extremely intensive and extensive. Over 90 % of Finnish forests are in commercial use and affected by systematic forest management. Forestry has changed Finnish forests, swamps and small water bodies dramatically and forest management together with its indirect effects such as ditching and forest road construction, has caused a major biodiversity crisis.

The most serious threats to forest biodiversity have been caused by the forestry of the industrial era, although Finnish forests have been used for centuries. The state has had a strong role in encouraging intensive forestry. Finnish forestry organisations, such as the 13 Forest Centres and 206 regional Forest Management Associations promote forest use in privately owned land in ways that are seen to be favourable to the forest industry.

Finnish forest management is based on a systematic cycle that includes seedling, two or three thinnings of the young forest, and finally regeneration by clear-cutting. Logging is highly mechanised – 97% of regeneration loggings are done by forest machines. The Finnish forest management model aims at an even age class structure of trees, that is supposed to ensure a steady flow of timber to the industry. Indeed, nowadays most of Finnish forests are seedling stand or young stapling forests, whereas in natural state a majority of boreal forests would be old (>300 yrs).(2)

A long history of systematic forest management and intensive forest use has altered the majority of Finland's forest so significantly, that a functional network of protection areas and reserved habitats and ecological connections is essential in order to preserve forest biodiversity.

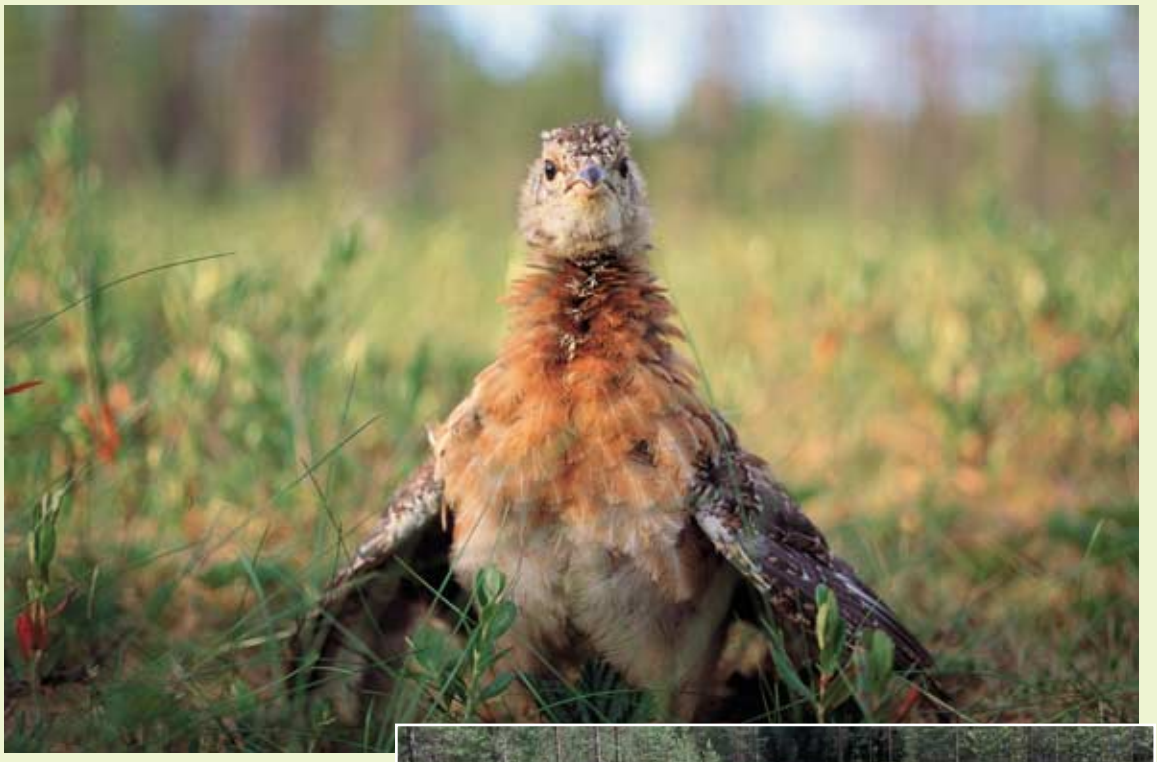
1.2. State of forest biodiversity in Finland

There are estimated to be 40 000–50 000 species in Finland, of which 20 000 are forest species. 62 forest species are estimated to have faced extinction, 564 to be threatened and 416 to be near threatened (3). The real figures are probably much worse, as the information on two thirds of forest species is insufficient to monitor their state.

The combined effects of forestry are the most significant threat factor of species in Finland. Forest species are threatened because forest management has caused dramatic changes in their habitats. A significant part of our forest species (4) cannot sustain in commercial forests, because of their degraded structure and open microclimate. Suitable habitats for demanding old-growth forest species still exist, but only in separated patches in the "sea" of commercial forests.

The most important threat factors imposed by forest management on forest species are changes in age and tree-species structure of the forests and decreases in the

This pristine olg-growth forest in Kuhmo, eastern Finland, was clear-cut by the state Forest and Park Service in 2000, ignoring tens of threatened species that inhabited the area. ***Photo: Risto Sauso***



The capercaillie (*Tetrao urogallus*) suffers from the ditching of forests and swamps, because their young easily drown in the drains. Ditching is indeed one of the reasons why the population of the capercaillie has declined by 60% during the last 40 years. (12). *Photo: Hannu Huttu/ Luontokuvat. Inset photo: Harri Hölttä.*

amounts of dead wood. The volumes of dead wood in Finnish forests have decreased by 90–98% from natural amounts because of forest management (5). About 20–25% of forest species in Finland are dependent on standing or lying dead wood as their food or nesting material, and many of these species are now threatened. The majority of swamp and water body ecotones of natural forests have also been destroyed by forestry, having great effects on species diversity.

1.3. Natural forests

Only 3–5% of Finnish natural or semi-natural old-growth forests remains (6). About half of these forests have been protected, and the remainder will disappear or be severely fragmented during the next 10 years if the current trend is allowed to continue. State-owned old-growth forest is still continuously being logged by the Finnish state enterprise Forest and Park Service, despite ecological research results showing that the amount of old-growth forest habitat is already too small to ensure the long term survival of the species of natural forests (6). The logging of old-growth forests results in the destruction of hundreds of occurrences of threatened species every year(7).

1.4. Forest protection in Finland

3,6 % of productive forests have been protected in Finland. With low productive scrub land added, the figure is 6,6% (8). The protection status of most forest habitat types is unfavourable in Finland. Only the northernmost and most low productive habitats have reached a favourable protection status. Threatened and declining habitats include natural western taiga forests or boreal old-growth forests, wooded mires and primary succession stages of the forests of landupheaval coast. Their clear-cutting and supplementary ditching is still widely allowed and part of everyday forestry. Prioritised habitat types, such as spruce mires that are natural concentration areas of boreal biodiversity, are still being permanently destroyed by clear-cut-

ting, soil preparation and supplementary ditching, with the support of state subsidies (see also chapters 2.1. and 2.2.).

Finland's protection reserve network has been assessed in the Evaluation of Finnish Nature Reserve Networks Programme by the Finnish Environment Institute (9). Serious deficiencies in the network have been showed, of which some are described below. The Commission of the European Union has also assessed the Finnish Natura 2000-network proposal and found several forest habitat types to be insufficiently preserved.

The Finnish protection network concentrates strongly on the low-productive forests of the northboreal zone of northernmost Finland. Only about half of the old-growth western taiga forests in eastern and northern Finland have been protected. This is not enough to ensure the long-term survival of taiga nature and species.

Prioritised habitat types, such as spruce mires that are natural concentration areas of boreal biodiversity, are still being permanently destroyed by clear-cutting, soil preparation and ditching, with the support of state subsidies.

In the mid-, south- and hemi-boreal zones of southern Finland, the network is most seriously insufficient. The need for forest protection is urgent and hundreds of species are at risk to vanish unless urgent action is taken(10). Only about 1% of southern Finland's forests have been protected. Less than 0,5% of forests have preserved their natural state. Few protection areas are old-growth or in natural state and in most cases the current protection areas are too small to maintain their biodiversity values in the long run.(2) Despite this, clear-cutting of high conservation value forests is still allowed in the immediate surroundings of these protection areas, even on state land.

1.5. Ditching

Originally, the boreal landscape has consisted of a mosaic of swamps, forests and lakes. This landscape has once covered entire boreal Scandinavia. A third of Finland's total land area has originally been swamps. At present, a vast majority of swamps has lost their natural state and characteristic features because of forestry ditching and peat extraction (9). One third of the world's forestry drains have been estimated to be in Finland (11). The combined effects of ditching and logging have destroyed the majority of small water bodies in Finland. Ditching has had severe negative effects on e.g. the rivers important for the *Margaritifera margaritifera* clam.

Although the real "ditching frenzy" dates back to the 1950s-1970s, ditching has continued actively in the 1980s also, and is still a part of Finnish forest management. The state of threatened swamp species worsened in the 1980–1990s, and this negative development can be expected to continue in the future as swamp species are adapting to the decrease in their habitats with a time-lag.

1.6. Buffer zones in Finnish forest legislation

Article 8 of the CBD on *in situ* -protection obliges to promote sound environmental practices in the surroundings of protection areas as to preserve their value. This objective has been omitted totally in Finnish biodiversity legislation. However, the protection of a forest area or a species habitat is not sufficient unless it ensures the long-term sustenance of the related biodiversity values. Small protection areas have a great risk to lose their essential features as a result of surrounding land use.

The Finnish reserve network is severely affected by the intensive use of commercial forests. It is a common practise in Finland to extend a clear-cut to the very borders of protection areas. According to recent research results, the sharpest edges in Finnish forest landscape can be found between protection areas and the commercial forests surrounding them (13). However, buffer zones for protection areas or habitats preserved by the Forest Act are not required at all in Finnish forest legislation. In the case of the Forest Act habitats, this omission results in practically all of the habitats losing their micro-climate because of the edge effect of surrounding forest use (see also 2.2). Especially in southern Finland, where protection areas are generally very small, the lack of buffer zones severely decreases the biodiversity value of the forest reserve network. Indeed, many occurrences of threatened species in current protection areas have vanished as a result of logging and ditching in their surroundings (14).

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(1) Raimo Tammilehto, Minister of Agriculture and Forestry, in the journal *Forestry* 1/2002.
(2) *Forest protection in southern Finland and Ostrobothnia*, Ministry of the Environment, 2000.
(3) *The 2000 Red List of Finnish species*, Ministry of the Environment, 2001.
(4) Siitonen, J. Ed., Finnish Forest Research Institute, Research Report 812, 2001.
(5) Siitonen, J., 1998.
(6) Virkkala et al., 1996, 1999.
(7) Lindgren, M., 2001.
(8) The Finnish definition of forest land is land on which the potential annual growth of the tree stand is 1 cu. metre/hectare or more. Respectively, the definition of scrub land, or low-productive land, applies to land on which the annual tree growth is less than 1 cu. metre/hectare. About half of the Finnish scrub land "forests", such as mountain birch areas, do not fulfil international definitions of forest (FAO etc). Forestry land includes forest land, scrub land, treeless waste land and other forestry areas such as forest roads and depots. Source: *Areas of protected forests in Finland,* Ministry of Agriculture and Forestry and the Ministry of Environment, 1999.
(9) See e.g. Virkkala et al., *Protected forests and mires...*, Finnish Environment Institute, 2000 and Aapala, K. ed., *Assessment of the network of protected mires in Finland*, Finnish Environment Institute, 2001.
(10) Hanski, I.
(11) Finnish Enviroment Institute, 2002.
(12) Finnish Game and Fisheries Research Institute, 2002.
(13) Kallio, M., *Comparison of nature reserves and surrounding areas using land cover and land use data*, Finnish Environment Institute, 2001.
(14) Syrjänen, K., 2001.

2. Analysis of the measures taken by Finland to implement the Convention on Biological Diversity in forest ecosystems

Finland's official forest policy lists the following decrees, processes and laws as the most important measures to implement the CBD in forests (1):

1) The National Forest Programme 2010
2) Regional Forest Programmes
3) The Forest Act
4) The Nature Conservation Act
5) Landscape Ecological Planning in state forests

These measures are analysed in the next chapters, the aim being to evaluate their concrete effects on biodiversity and how effective the measures are in meeting the objectives of the CBD.

2.1. The National Forest Programme

An initiative for the National Forest Programme (NFP) came from international agreements and commitments such as the CBD, the Intergovernmental Panel on Forests IPF (1997 resolutions and action points), the Intergovernmental Forum on Forests IFF, the United Nations Forum of Forests UNFF, and the Ministerial Conferences for the Protection of Forests in Europe (1993 and 1998).The National Forest Programme is also a part of the National Action Plan for Biological Diversity (1997) and the Environmental Programme for Forestry (1994). National programmes to intensify forestry have been made for decades in Finland.

Finland has actively promoted NFPs as a tool for sustainable forestry in international fora such as the UNFF, the IPF and the IFF. Finland's own programme, however, is a bad example of a sustainable forestry programme. It is an old-fashioned programme to promote one industrial sector, its main aim being to intensify forest management and increase logging volumes. Ecological and social sustainability are included in the programme as general aims, but in practice all other aspects of sustainability are ran over by the aims of economic sustainability and forest industry's growth.

The National Forest Programme 2010 (functional in 2000–2010) was approved by the Finnish Government in 1999. The programme's official aim was to "*balance ecological, economic and social aims with the intent to achieve and maintain favourable conservation status for species and habitats through a suitable combination of protected areas and the application of varied management methods in commercial forests*".

Main targets of the NFP are:
– to increase forest industry's annual consumption of domestic roundwood by 5–10 million cubic metres
– to double the value of wood industry's exports to EUR 4.2 billion
– to increase the annual use of wood for energy production by 5 million cubic metres

The NFP aims at a yearly increase of 5-10 million cubic metres in the consumption of domestic wood by the forest industry in the years 2000–2010, setting the annual logging target at 63–68 million cubic metres. This aim is to be attained by increasing forest investments and state subsidies for forest management. In 2002, the state will subsidise forest management in private forests by 58 million euros.

With indirect subsidies added, the state has been estimated to support forest management worth 350 million euros annually (2). Many of the subsidised forest management procedures are directly harmful to forest biodiversity, such as supplementary ditching and forest road construction.

The increase in logging volumes proposed by the NFP is unwary of the precautionary principle. Finnish forests are already used to the full. The annual drainage from the forests is over 90% of annual growth (3). The target logging volumes of the NFP will take logging to the limits of economic sustainability. At least the drain of spruce will exceed its growth, as happened already in 2000 (4).

The ecological aims of the NFP have few quantitative or clearly defined targets. The only numeric target is to increase the resources directed to the management of protection areas to an annual level of 16 million Euros.

The National Forest Programme imposes a notable increase in clear-cuts in Finland´s already intensively used forests. The increase in logging will be directed in mature forests that also include the forests of most conservation value. However, the NFP includes no mechanism to keep high conservation value forests outside logging operations, nor does it propose such a mechanism to be developed.
Photo: Matti Liimatainen.

Funding of 4,2 million euros has also been allocated to the promotion of the management of forest nature in the government budget. All in all, funding for the preservation of forest biodiversity seems very modest in comparison to the hundreds of millions that are annually allocated to support intensive forestry. The NFP states also that solutions should be sought to improve the conservation status of southern Finland, where only about 1% of forests have been protected, and where the crisis of forest biodiversity is most serious. A scientific committee was appointed to estimate the need for protection in southern Finland. The committee concluded unanimously in 1999 that the need for forest protection in southern Finland is both urgent and large-scale (5). However, in 2000 the Parliament decided that no more state funds will be directed to conservation before 2007. This decision at last prevents any possibilities to implement the NFP in an ecologically, socially and economically balanced way.

In practice all other aspects of sustainability are ran over by the aims of economic sustainability and forest industry's growth.

Most environmental NGOs were not allowed to participate in the preparation of the NFP. Those that were invited to participate, WWF and the Finnish Association for Nature Conservation, had little power to affect the outcomes of the preparatory work.

2.1.1. Environmental impacts of the NFP

An increase in logging volumes of already intensively used forests will evidently have negative effects on biodiversity.

The Environmental Impact Assessment (EIA) of the NFP warned, that the notable increase in logging proposed by the program will evidently strengthen the harmful effects of forest management to biodiversity. "*The main effects on biodiversity are related to an increased risk of exploitation of forest with protection values and increasing difficulties to maintain areas with natural forest dynamics, especially in southern Finland.*"(6) The increase in logging will be directed in mature forests that also include the forests of most conservation value. However, the NFP includes no mechanism to keep high conservation value forests outside logging operations, nor does it propose such a mechanism to be developed.

The EIA also noted, that increased logging in mature forests implies a change in the age class structure of Finnish forests towards a structure where young forests are even more predominant than presently. Thus, in the near future the age structure of forests will be increasingly unfavourable to biodiversity and the state of threatened old-growth forest species will worsen. NFP's logging targets will also increase the pressure to harvest timber from the wooded mires of special conservation value defined in the EU's habitat directive.

The problems reported in the EIA did not affect the contents of the NFP in any way. They have also been ignored in the follow-up process of the NFP.

2.1.2. Implementation of the NFP

The NFP included an aim to implement the program in a way that balances the needs of economic, ecological and social sustainability. In practice, emphasis in the implementation of the program has strongly been on the sustainability of flows of timber to the industry. Ecological aims of the NFP have stayed on paper.

The first year of the NFP's implementation period, 2000, was a record year in the industrial use of domestic round wood. A total of 63,5 million cu. metres of domestic round wood was used, including exports. The value of forestry exports rose by 16% in 2000, and was record high for the third year in the row. As industry's investments have also been high and forest industry's capacity is growing, it seems that the economic targets of the NFP are being approached with a speed more than satisfying, despite

the partly unfavourable market conditions of 2001.

The EIA of the NFP notified that logging can be increased to the level implied by the programme (over 60 million cu. metres a year) only if Finland's protection network is improved simultaneously and important habitats are carefully preserved in logging. Finland's thematic report on the protection of forest ecosystems under the CBD states that "steps will be taken to reduce the ecological risk factors, which became apparent in the EIA for

the programme". There is no sign of these steps, whatever they might be. No concrete measures have been taken to reduce the ecological risks mentioned in the EIA. There is no mechanism to keep high conservation value or old-growth forests outside logging, or to find threatened species before logging operations.

Furthermore, the possibilities to realise the most significant ecological target of the NFP, the protection of forests in southern Finland, have been inhibited until 2007. A committee has been appointed to plan the realisation and funding of protection, but the committee is forest industry dominated and has no true will to protect forests. Furthermore, the committee is chained by the State Council's decision to freeze all funding for the foundation of conservation areas until 2007.

In the light of research results that emphasise how urgent it is to tackle the forest biodiversity crisis of southern Finland, these decisions seem outrageously irresponsible. The only conclusion that can be drawn is that among top Finnish decision makers there is no political will to protect biodiversity, nor an understanding of what threats ignorance of biodiversity destruction impose. Irreplaceable losses will be faced in the forests of southern Finland before 2007, especially as the NFP and the Regional Forest Programmes direct logging in the mature forests of those very areas of southern Finland where the forest biodiversity crisis is most serious.

Although Finland has advanced towards a more transparent administration model in many sectors, the Ministry of Agriculture and Forestry still sees that forest authorities have a monopoly for information on commercial forests and a right to prohibit impartial and transparent evaluation of their operations.

2.1.3. Regional forest programmes

Regional Forest Programmes (RFPs) are drawn up by Finland's 13 Forestry Centres. The aim of the RFPs is to adapt the targets and aims of the National Forest Programme to a regional level. According to the Finnish Forest Act, the RFPs should ensure the balanced economic, ecological and social sustainability of forest use. Respectively the programmes should define the needs and targets for improvement in regard to all aspects of sustainability.

In practice, the RFPs are one-sided programs that aim at intensifying forestry. The programmes define targets in euros and hectares for increases in logging, ditching and road construction. In some programmes, measures to protect forest biodiversity or indicators that could be monitored have not been defined any target levels. Furthermore, the programmes fail to present sufficient counter-measures to the threats imposed to biodiversity by the NFP. These threats include the destruction of the few remaining semi-natural old forests of southern Finland as the result of increasing clear-cuts.

The RFPs are required to contain an EIA. However, the EIAs have not been made by impartial experts, but instead the Forestry Centres have made them internally as a part of the preparation of the programmes. In most RFPs the EIAs only manage to scratch the surface, and they seldom reveal any essential impacts of the RFPs to biodiversity or environment. Many regional ENGOs have participated in the planning of the programmes. The proposals of the NGOs have primarily not left any trace in the outcomes.

2.2. Forest Act

The reformed Finnish Forest Act (1093/1996) came in to force in January 1997. The Forest Act mentions, as its general aim, "*to promote economically, ecologically and socially sustainable management and utilisation of the forests in such a way that the forests provide a sustainable satisfactory yield while their biological diversity is being maintained*".

In practice, the Forest Act obliges to preserve biodiversity only in seven specifically defined *habitats of special importance* (7). The habitats of special importance of the Forest Act have been estimated to cover about 0,36 % of forestry land in southern Finland (not all of this is forests, scrub land and waste land are included).(8) In the 99,6% of forestry land outside protection areas, a forest owner can legally destroy valuable habitats and occurrences of threatened species (see chapter 2.3).

According to national forest inventories, the *de facto* abundance of the habitats listed in the Forest Act is multiple, even tenfold, to the amount actually preserved by the Forest Act. However, the strict criteria of the Forest Act leave most of the habitats without protection. For example, National Forest Inventories have defined 4800 hectares of eutrophic spruce-mires (in the area of six Forestry Centres), while the mapping of Forest Act habitats has defined only 460 hectares of them.

Table 1. The Natural state and of springs and their consideration in forestry operations in the Forestry Centres of North Savo and Pirkanmaa

Forestry Centre	Total area of springs ha	Forest Act springs ha/%	Natural-state springs ha/%	Strongly degraded springs ha/%	Serious damage by forestry since 1970s ha/%
North Savo	484	132 / 27%	3 / 0,6%	141 / 29%	290 / 60%
Pirkanmaa	59	10 / 17%	0 / 0%	50 / 85%	50 / 85%

Source: The Folia Forestalia 4B/2000 and 2B/1999, the Finnish Forest Research Institute.

2.2.1. What the Forest Act excludes

The Forest Act's list of habitats of special importance excludes many habitat types that are crucial to the protection of forest biodiversity, such as boreal old-growth forests (western taiga forests in the EU Habitats Directive), most of productive spruce mire types, and the natural forests of primary succession stages of the landupheaval coast. Finland shares special responsibility of maintaining these habitat types with Sweden within the European Union. Thus there is all the more reason why special attention should be paid to them in national forest legislation. This has not been Finland's choice, and habitats like old-growth forests and spruce mire forests are still being destroyed by clear-cutting, ditching and mounding as a part of the everyday practices of forest management. Forests of riverbanks and productive pine-dominated mires have also been ignored by the act.

The Forest Act fails to define clearly the obligation (of environmental authorities) to protect threatened species in commercial forests. Vague definitions of authorities' responsibilities further complicate the protection of threatened forest species such as the flying squirrel (see chapter 2.3.2.).

2.2.2. Majority of Forest Act's habitats open for logging

Serious problems exist also in the treatment of those habitats that have been included in the Act. A majority of the habitats is left outside the scope of the law (see table 1) as a result of their strict selection criteria. The habitats preserved by the Forest Act are chosen against strict criteria that require the habitats to be 1) notably representative of their type, 2) small in size (usually under one hectare), 3) clearly distinguishable from their surroundings and 4) in natural or semi-natural state. These criteria result in many of the most valuable habitats being left out of the scope of the act and open for any logging.

The most serious deficiency of the criteria is that habitats larger than one hectare are usually too large to be protected. In many cases areas where a certain habitat is concentrated are especially valuable to biodiversity and support more threatened species. Now, the Forest Act allows such focal areas of biodiversity concentration to be fragmented and degraded. Also, natural or semi-natural state is required from both the water dynamics of swamps and water bodies and from the structure of the tree stand. It is very difficult to find habitats that fulfil these criteria in commercial forests, except for occasional fragments.

2.2.3. Quality of the preserved habitats

Detailed information on the habitats preserved by the Forest Act is available to forestry authorities only (see chapter 2.2.5.). Consequently, it is difficult to estimate the value of the preserved habitats for biodiversity. However, estimations on the average size of the Forest Act habitats (usually less than one hectare) does imply, that their effect on the protection of threatened species is relatively minor and more naturally compared to retention tree groups than to protection areas. Furthermore, as there are no restrictions concerning forestry operations in the surroundings of the habitats, it becomes clear that the preserved habitats probably cannot offer the sheltered micro-climate that several threatened species of these habitat types require.

Many of the Forest Act habitats are still destroyed or damaged in forest management operations. According to the surveys of the Forestry Development Centre Tapio, in 2000 and 2001 more than a third of wooded Forest Act habitats subject to forest management were destroyed or damaged by the operation. The effects of forestry on the Forest Act habitats, even in cases of minor apparent damage, are always great because of the small size and fragmented occurrence of the habitats. The state of the habitats is made more sensitive as the features of most of the habitats have already degraded seriously. Results of the National Forest Inventories show that only a fraction of these habitats have maintained their natural state and a majority of them have been seriously damaged in forestry operations during the last 30 years (See table 1).

2.2.4. Supervision of the Forest Act

Compliance to the Forest Act is supervised by the Forestry Centres. Annually the Forestry Centres check about 2% of forest management operations.

The incentive to comply with the Forest Act to preserve biodiversity is weakened by the fact that non-compliance to or violation of the law rarely results in a charge or prosecution. The numbers of cases in 1997–2000 can be seen in table 2. The figures are clearly inconsistent with the results of the Forestry Development Centre Tapio showing that a significant part of Forest Act habitats are annually damaged in forestry operations.

TABLE 2. Cases of suspected Forest Act habitat violations and the number of declared forest management operations in 1997–2000.

Cases of suspected habitat violation	141
No investigation, case considered to be of minor importance	75
Investigation, notice to the prosecutor	25
Prosecutor's decision of minor importance (no court process)	9
Case outdated at the police or prosecutor	6
Case pending at the police or prosecutor	5
Court handling	2
Charges inflicted by the court or prosecutor	3
Declared forest management operations in 1997-2000	401 889

Source: Mauri Liukkala, 2001. Forestry Development Centre Tapio, Annual Statistics 1997–2000.

Generally, the weakness of biodiversity legislation results from attitudes common among Finnish decision makers, according to which crimes against biodiversity are somehow less aggravating than other crimes of similar legislative status. In practice, charges with Forest Act violations are rarely raised because penalties can be inflicted only in cases in which the violation can be shown to have been *intentional*. Practically, this is very difficult to prove. The court has decided not to inflict a penalty for destroying a Forest Act habitat even in regard to a forest owner whose forests had been inventoried for valuable habitats prior to logging. According to the decision of the court, the existence of comprehensive inventories were *not* a sufficient prove that the violation was intentional.

If the implementation of the Nature Conservation Act continues to proceed at this speed, it will take 400-700 years for Finland to protect the current specially protected species. Furthermore, over half of the species of wooded habitats defined as nationally threatened, and practically all regionally threatened species in Finland fall out of all protection measures of authorities.

2.2.5. Transparency of administration and the Forest Act

Detailed information on the location and quality of Forest Act habitats are available to forestry authorities and forest owners only. In effect, this makes it impossible to evaluate the biodiversity effects of the Forest Act by any impartial party.

This practice also impedes the work of environmental authorities. For example, Environmental Centres are legally obliged to supervise water body protection in forest management operations. However, as the Forestry Centres do not give out the information concerning Forest Act habitats, even in cases in which they include water bodies, it is practically impossible for Environmental Centres to supervise the law. Information on threatened species possibly found in inventories of the Forestry Centres are not available to environmental authorities either, although it is the duty of the Environment Centres to protect the threatened species.

The Environment Centre of North Karelia has made a complaint to the Finnish Chancellor of Justice on the issue. So far no solution has been reached and the implementation of biodiversity conservation in the forests lags far behind what the letter of the law implies. The reasons for this can mostly be tracked down to the traditions of extreme self-sufficiency and supremacy of the forest administration.

Although Finland has advanced towards a more transparent administration model in many sectors, the Ministry of Agriculture and Forestry still sees that forest authorities have a monopoly for information on commercial forests and a right to prohibit impartial and transparent evaluation of their operations.

2.3. Nature Conservation Act

Finland's Nature Conservation Act (1096/1996) was reformed in 1996, and the new act came into force in January 1997. The incentive for the reform of nature conservation legislation came from the need to meet the latest international obligations to protect biodiversity, arising from the CBD and especially from the EU Bird and Habitat Directives (79/409/EEC and 92/43/EEC respectively). The act aims at the *favourable conservation status* of natural habitat types and native species (9) and it gives tools for protection including the foundation of protection areas and the protection of threatened species.

The endangerment of Finnish species is evaluated according to the IUCN threat categories. The most recent Red List was completed in 2000 (10). Threatened, rare or declining species can be placed under legal protection by the Nature Conservation decree. The Nature Conservation Decree (169/1997) lists protected species, threatened species, specially protected species and prioritised species

and habitats of EU Habitat and Bird Directives. Furthermore, the Nature Conservation Act obliges the Ministry of Environment to monitor the state of native species and habitats, and in case of detected unfavourable conservation status to take measures to attain a favourable status.

It is a generally accepted principle, that the conservation status of all threatened species and habitat types is unfavourable. However, there are no processes to protect most threatened species and habitats in Finland. 32% of threatened species are specially protected by the Nature Conservation Decree. Their protection should be brought into effect by regional Environmental Centres that define the occurrence and notify the land-owner. So far, only 66 occurrences have been demarcated since 1997, and only a handful of them for forest species. If the implementation of the Nature Conservation Act continues to proceed at this speed, it will take 400–700 years for Finland to protect the current specially protected species. Furthermore, over half of the species of wooded habitats defined as nationally threatened, and practically all regionally threatened species in Finland fall out of all protection measures of authorities. The obligation to protect these threatened species is not clearly defined in neither the Forest nor the Nature Conservation Act.

The deficiencies of the biodiversity policy of Finnish forestry can be most clearly seen in the protection of the flying squirrel. ***Photo: Tapio Tuomela.***

2.3.1. No resources, no inventories

Finnish authorities have not been able to create functional systems to protect threatened species. Even the known occurrences of threatened species can still be destroyed. The obvious reason for this is the lack of resources of environmental administration. Hundreds of occurrences of threatened species are destroyed annually because nobody knows of their existence or because the landowner has not been officially notified. Even on state land systematic and thorough species inventories are carried out only occasionally. In privately owned forests no authority is obliged to survey the possible existence of threatened species before logging, not even in cases where obvious conservation values can be seen in the forest. The state of species conservation is outrageously unsustainable. Indeed, the Environment Centre of South Savo stated in 2000, that "main responsibility for the preservation of flying squirrel habitats is on the operators of forest machines".

2.3.2. Case: The flying squirrel. When the flight does not carry far enough to reach a tree...

The flying squirrel (*Ptemorys volans*) is a species of old mixed spruce forests. Its habitats are always characterised by mature or old trees, usually big spruces, and a mixture of broad-leaved deciduous trees which it feeds on. Originally, it is probably a species of old-growth forests, inhabiting the hollows of giant aspens sheltered by an ancient spruce forest.

The population of the flying squirrel in Finland is strongly declining. The species has been defined vulnerable in the 2000 Red list of Finnish species (10). Within the European Union, Finland carries the responsibility for the protection of the flying squirrel. Thus, the species has been included in both II and IV Annex of the habitat directive. Obligation to protect the habitats of the species has also been included in the Finnish Nature Conservation Act.

Despite the special legislative status of the flying squirrel, Finnish authorities have watered down the obligation to protect the species to concern only its *known nesting trees*. As no systematic inventories of the flying squirrel's habitats have been done, hundreds of its refuge forests are unavoidably destroyed every year. Several investigation inquiries have been made to the police concerning cases where a known habitat of the flying squirrel has been destroyed, but they have not lead to any practical conclusions or changes in policies. After years of unsuccessful domestic work to improve the protection of the species, Finnish environmental NGOs have made an official complaint to the European Union on the systematic neglect of the protection of the flying squirrel.

2.4. Landscape ecological planning in state forests

The state owns about a fourth of Finnish forests – 24,6% of forest land (including protection areas) and 33,4% of forestry land (7). State forests are governed and logged by the state enterprise Forest and Park Service FPS (also called Metsahallitus). State forests concentrate in northern and eastern Finland, and include a majority of Finland's valuable old-growth forests.

As an enterprise, FPS has a profit target of 47 million euros in 2002. Some 90% of this comes from timber sales. The profit target is set by the Ministry of Agriculture and Forestry, based on FPS' proposal. Eventually the profit target is approved by the Finnish government every year. The profit target is what, in practice, defines the limits to how carefully forest biodiversity and the multiple use of state forests (e.g. tourism, reindeer herding, game protection) can be taken into account. The profit target has been steadily increasing for years. Environmental NGOs have estimated that the profit target should be at most half of its present value in order to truly be able to strive for the sustainable use of state forests.

In the case of old-growth forests, it seems that landscape ecological planning and the small habitats preserved by it have been used as an excuse to *decrease the original area of old-growth forest habitat.*

The 1993 Helsinki Ministerial Conference on Forests came up with a set of principles of maintaining forest biodiversity as a part of sustainable forestry. The main ideas of the Ministerial Conference were included in the reformed Forest and Park Service Act in 1994. The new Act requires state forests to be used in an ecologically, socially and economically sustainable way. This objective is hoped to be attained by Landscape Ecological Planning (LEP). The basis of LEP is in ecological theories that aim at using forests *in a manner that enables forest ecosystems to function in the long run* (11). In 1996-2000, LEPs have been made for 112 areas of state forests sized 1000–150 000 hectares each.

LEP was also a response to the increasing demands of the early 1990s to increase protection in state forests. Indeed, nowadays the FPS uses LEP as an excuse to why protection of state forests is not increased or small protection areas expanded. This is unreasonable as the small habitats preserved by LEP can compliment protection areas but not compensate for them.

In effect, the FPS has used LEP and the partly participatory planning related to it to justify their status as the final decision maker on the use of state forests. However, from the perspective of biodiversity conservation, it seems unsustainable that an enterprise, guided by profit targets, has such supreme power to decide on the use of state forests, even in conservation matters. For example, FPS was allowed to decide which state forests were included in Finland's Natura 2000-network, leaving many important areas out. Also, market conditions seem to direct how the LEPs are being implemented. FPS has clear-cut mating areas of the capercaillie defined as "game areas", simply because "the market demand for timber required it"(12).

2.4.1. Case: Old-growth forests

Finland's Protection Programme of Old-growth Forests had a significant role as an initiator of LEP in state forests. The Old-growth Forest Protection Programmes were drawn up in 1992–1996 (Programmes of Southern Finland in 1992 and 1994 and the Programme of Northern Finland in 1996) . The Old-growth Forest Protection Programmes have not led to a favourable conservation status of old-growth forests. The area of the threatened old-growth forest habitat decreases continuously, despite acknowledged scientific data showing that there is already too little left of the habitat to ensure the long term survival of species of natural forests (13).

The LEPs set regional target proportions for old-growth forest habitat, but the targets are inconsistent, usually 4-10% of forest area. Ecological research results show that the probability of extinctions increases significantly when the area of suitable habitat falls below 10–30% of its original area (14). Thus, the target level should be at least 10%. In several focal areas of old-growth forest concentration, the area of old-growth forest habitat will fall below these ecologically critical threshold values as a result of the LEPs (15). In the case of old-growth forests, it seems that LEP and the small habitats preserved by it have been used as an excuse to *decrease the original area of old-growth forest habitat*. This is impossible to justify ecologically, as it is clear that the total area of the original habitat is the most important factor affecting the sustenance of species diversity.

2.4.2. Ecological facts controlled by economic limits

The LEPs are drawn up mostly by FPS' Forestry department, supervised by the Ministry of Agriculture and Forestry, and Conservation department (called the Natural Heritage Service) supervised by the Ministry of Environment. Final decisions, even those concerning protection, are made by the forestry department, guided by profit targets.

A serious problem inhibiting the LEPs from forming functional ecological networks is that economic frames have been set by FPS to limit ecological planning. In several areas, the total area that could be left outside logging was defined before inventories of valuable habitats had even begun. These kind of economic limitations are inconsistent with the aims of LEP.

2.4.3. Case: Biodiversity enhancement areas

The purpose of the biodiversity enhancement areas is to form areas that are restored, or let to develop, towards a more natural forest structure. These areas could then

support small protection areas and function as buffer zones for them, or in the long run form valuable habitats to areas where they no longer exist. This kind of areas would be of utmost importance especially in southern Finland, where most protection areas are too small to function ecologically. FPS' practise has, however, been quite different from the purpose of biodiversity enhancement areas. According to FPS' guidelines, biodiversity enhancement areas can be logged, but more retention trees than average should be left on the site. In several cases, forests suitable to be protected seem to have been defined biodiversity enhancement areas only to justify their logging. Thus, a biodiversity enhancement tool has become a tool for destroying valuable forests, rather than restoring habitats where they no longer exist.

A biodiversity enhancement tool has become a tool for destroying valuable forests, rather than restoring habitats where they no longer exist.

2.4.5 Case: Sensitive high altitude forests subject to logging again

Regeneration of forests is difficult in northern Finland. In the sensitive high altitude forests of Lapland, the effects of forest use can be seen even for hundreds of years, and logging may have long-term consequences that sometimes inhibit regeneration of the forest altogether. This is why logging in high altitude areas in Lapland, 250–330 metres above sea level, has previously been restricted.

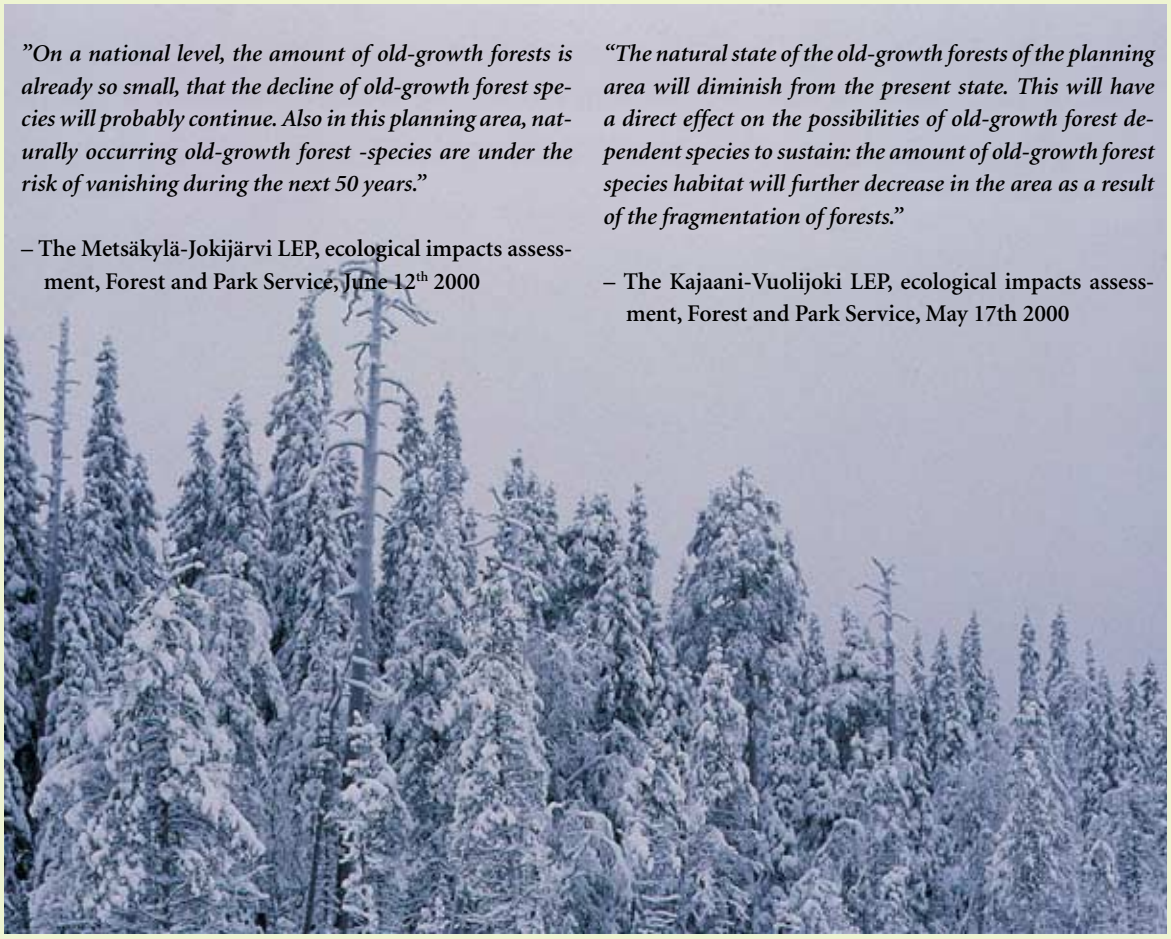
Part of the high altitude areas were included in the protection programmes of Wilderness Areas and old-growth forests. However, 200 000 hectares of high altitude forest land were left in the Forest and Park Service's governance. Systematic logging began in the pine-dominated forests of these areas in the 1990s. Legislation that used to protect the sensitive nature of high altitude forests of northernmost Lapland (the Shelter Wood Act) from logging had been repealed in 1997 as forest legislation was reformed. The area of forest land outside timber production has diminished from the level of the 1980s, especially in Lapland, as high altitude areas have been opened for logging. According to Lapland's forests 2000-programme of 1988, 950 000 hectares of forest land were outside timber production. At present, the area is clearly less. It is not easy to form a clear picture of logging in high altitude forests as the FPS no longer uses this category in its forestry plans. However, it is clear that these sensitive forests are now subject to logging operations that can damage landscapes for very long time periods.

"On a national level, the amount of old-growth forests is already so small, that the decline of old-growth forest species will probably continue. Also in this planning area, naturally occurring old-growth forest -species are under the risk of vanishing during the next 50 years."

– The Metsäkylä-Jokijärvi LEP, ecological impacts assessment, Forest and Park Service, June 12th 2000

"The natural state of the old-growth forests of the planning area will diminish from the present state. This will have a direct effect on the possibilities of old-growth forest dependent species to sustain: the amount of old-growth forest species habitat will further decrease in the area as a result of the fragmentation of forests."

– The Kajaani-Vuolijoki LEP, ecological impacts assessment, Forest and Park Service, May 17th 2000



This old-growth forest photographed in the winter of 2000 in Kuhmo, eastern Finland, near the Ulvinsalo strict nature reserve has now been clear-cut by the Forest and Park Service. ***Photo: Risto Sauso.***

Fragments of mature forests are surrounded by clear-cuts and seedling stands in the exploited Finnish forest landscape. Clear-cuts in state forest in Kuorevesi, southern Finland in the autumn of 2001. *Photo: Greenpeace/Cajander.*

(1) *Finland's thematic report on the protection of forest ecosystems*, 2001.
(2) Harstela, P. et al., Finnish Forest Research Institute, 2001.
(3) Tomppo, E., 1999, 2000.
(4) Finnish Forest Research Institute, 2001.
(5) *Forest protection in southern Finland and Ostrobothnia*, Ministry of the Environment, 2000.
(6) Hildén et al., *Environmental Impact Assessment of the National Forest Programme*, 1999.
(7) Habitats of special importance are: 1) The immediate surroundings of springs, streams, wet hollows in the permanent beds of streams, and small pools; 2) herb-rich and grassy hardwood-spruce swamps, ferny hardwood-spruce swamps, eutrophic paludal hardwood-spruce swamps, and eutrophic fens located to the south of the Province of Lapland; 3) fertile patches of herb-rich forest; 4) heath-land forest islets in undrained wetlands; 5) gorges and ravines; 6) steep bluffs and the underlying forest; and 7) sandy soils, exposed bedrock, boulder fields, wetlands with sparse tree stand and flood meadows which are less productive than nutrient-poor heathland forests. Source: Unofficial translation of the Forest Act made for the Ministry of Agriculture and Forestry in 1997. Legally binding legislative texts exist in Finnish and Swedish.
(8) Tenhola & Yrjönen, 1999.
(9) "The conservation status of a natural habitat will be taken as 'favourable' when: 1) its natural range and areas it covers within that range are stable or increasing, and 2) the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and 3) the conservation status of its typical species is favourable as defined below. Conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as 'favourable' when: 1) population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and 2) the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and 3) there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis. Source: Habitat Directive 92/43/EEC
(10) *The 2000 Red List of Finnish species*, Ministry of the Environment, 2001.
(11) See e.g. Rulcker & Angelstam, 1994 and Forman & Godron, 1986.
(12) As stated by an FPS official in the newspaper Helsingin Sanomat in May 2000.
(13) e.g. Virkkala, 1999, Hanski, 1998, 1999.
(14) e.g. Jansson et al. 1999.
(15) *The Landscape Ecological Plans of Näljänkä, Metsäkylä-Jokijärvi, Hyry, Vepsä and Kajaani-Vuolijoki*, FPS, 1999 and 2000.

3. Transparency in the implementation of the CBD

Finland signed the international Convention on biological Diversity (CBD) in Rio de Janeiro in 1992, and ratified it in June 1994. Following the government's policy decision in November 1995, the Ministry of Environment appointed a National Commission for Biological Diversity in March 1996. This committee then drafted a National Action Plan for Biological Diversity for the period 1997-2005.

The implementation of the National Action Plan is monitored by an evaluation working group. This working group contains representatives from all Finnish ministries, the Forest and Park Service, the Finnish Association of Municipalities, the Central Union of Industry and Employers, the

Central Union of Agricultural and Forestry Producers (MTK), the Samí Parliament, and the Finnish Association for Nature Conservation (FANC). FANC is the only environmental NGO included in the working group. Its ability to influence, for example, national communications, is limited, as the working group, including secretaries and experts, contains some 27 members.

The working group has compiled follow-up reports on the National Action Plan for the periods 1997–1999 and 2000–2001. The working group also compiled Finland's second national communication to the CBD (a thick multiple-choice form). By contrast, the separate forestry-related thematic communication to the SBSTTA-7 meeting was compiled in an ad-hoc workgroup of government officials, which did not contain representatives from any NGO. Unlike the other national communications, the draft of the forestry paper was merely presented at the meeting of the evaluation workgroup, without allowing for discussion or decisions on its content. Environmental NGOs were thus completely unable to affect the forestry report's content before it was completed.

Transparency in the CBD communications reflects the general situation in Finnish administration: the forest administration still sees the pursuit of forest industry's interests as its most important task, leaving values like biodiversity conservation and transparency on paper.

Transparency in the CBD communications reflects the general situation in Finnish administration: the forest administration still sees the pursuit of forest industry's interests as its most important task, leaving values like biodiversity conservation and transparency on paper. This is regrettable, as it is clear that in order to attain the objectives of the CBD, honest and true participation of all ministries concerned with the use of natural resources is essential.

The Finnish Forest and Park Service is planning logging in the 3000 hectare Malahvia forest area close to the Finnish-Russian border. Environmental NGOs together with local people have appealed to the Ministry of Environment to preserve the area. There is still time to choose to "Save or Delete" what remains of the Finnish old-growth forests. ***Photo: Risto Sauso***

4. Conclusion and recommendations

In the light of critical analysis, it seems clear that Finland's measures to protect biodiversity have been insufficient and hindered by increasing demands to intensify forestry. The crisis of forest biodiversity must be tackled with a more thorough strategy that aims at preserving forest biodiversity in Finland in the long run. Forestry programmes should be implemented in a way that truly recognises the need to preserve biodiversity as one of their main goals. Environmental administration should be given more power to influence all decisions on the use of biological resources.

Recommendations

A) The National Action Plan for Biological Diversity (1) must be effectively implemented. This goal requires adequate funding (see recommendation D.).

B) Forest protection in southern Finland must be increased to attain a favourable protection status for forest habitats and species. The new protection programme should seek to ensure the long term maintenance of forest biodiversity in southern Finland. Immediate inventories of the high conservation value forests of southern Finland should be carried out. The protection network should consist of the remaining high conservation value forests of southern Finland and of restored habitats where natural-like forests no longer exist or are too small to preserve biodiversity. Funding for this programme should be included in the state budget 2003, in the form of a new Funding Programme for Nature Conservation.

C) The implementation of the National Forest Programme should be balanced to give sufficient consideration to ecological sustainability. To attain this, 1) forest protection must be increased in southern Finland as described in recommendation B., 2) subsidies for forests management operations that are directly harmful to forest biodiversity must be abandoned, 3) subsidies for the preservation of biodiversity in commercial forests must be increased, and 4) mechanisms must be developed to prevent the harmful effects of the National Forest Programme on biodiversity, as shown by the programme's Environmental Impacts Assessment (see chapter 2.1.1.), and to 4) include the findings of the Environmental Impacts Assessment in the follow-up process of the National Forest Programme.

D) The new Funding Programme for Nature Conservation should also cover the funding needs listed in the second follow-up report of the National Action Plan for Biological Diversity, including funding needs for the research, monitoring and protection of red-listed species; increases in the funding for preservation of biodiversity in commercial forests; and the development of national biodiversity monitoring and data systems. Funding to restore degraded ecosystems and habitats must be considerably increased, as recommended by the National Working Group on the Need for Restoration.

E) State forests:

1) All remaining state-owned natural and semi-natural old-growth forests listed in the Last of the Last maps published by Taiga Rescue Network in 2000 should be protected.
2) The state-owned high conservation value forests of southern Finland must be protected by a logging moratorium until the protection programme of southern Finland is operational.
3) A national expert committee must be appointed to develop the management of state forests in a way that is ecologically, socially and economically sound. This goal will require a considerable decrease in the profit targets of the Forest and Park Service. The scenario on forestry mimicking natural dynamics, as presented in the Evaluation Report of Landscape Ecological Planning, should be considered as a possible ecologically and socially sustainable model for the management of state forests (2)
4) The logging of forests essential to the reindeer herding of the indigenous Saami and other reindeer herders must be stopped.

F) A national expert committee must be appointed to revise the Forest Act to better preserve biodiversity in commercial forests.

(1) Commission for Biological Diversity, Ministry of the Environment, 1997
(2) Niemelä et al., Helsinki Consulting Group Ltd., 2001

5. Executive Summary

Finland ratified the Convention on Biological Diversity (UNCED 1992) in 1994. The National Environment Programme for Forestry was approved the same year, and the National Action Plan for Biological Diversity in 1997.

The Environmental Programme, new forest legislation and new forest management recommendations strive to define rules for sustainable forestry in Finland. Steps have been taken to promote the preservation of biodiversity in forests, but it seems evident that the steps are insufficient under the simultaneous pressure of increasing forest use. Biodiversity issues are still looked at as separate problems, rather than a part of all policy decisions on the use of natural resources. Finland's biodiversity policies are more words than actions, and more planning than implementation. In practice, social and ecological sustainability are always ran over by the aims of economic sustainability and forest industry's growth.

Protection measures have been strongly limited by economic demands and, in state forests, by profit targets that inhibit planning of reserve networks based on ecological grounds. Logging of high conservation value forests is allowed to continue despite strong scientific evidence on the need to protect them. Finland's rare old-growth forests are still continuously being clear-cut by the state enterprise Forest and Park Service.

3,6% of forest land has been protected in Finland, leaving the conservation status of most forest habitat types unfavourable. Furthermore, most protection areas are too small to maintain their essential features and ecological value in the long run. The small size of protection areas is especially serious as Finnish forest legislation requires no buffer zones at all for protection areas. Indeed, many threatened species have vanished from protected areas because of forest use in their immediate surroundings.

Deficiencies in the protection network are especially serious in southern Finland, where only about 1% of forests have been protected. Despite the urgent need to improve forest protection there, the government has decided to freeze state funding for additional protection until 2007. This is especially irresponsible as the logging increases imposed by the National Forest Programme 2010 are simultaneously being directed to the very areas of southern Finland, where the crisis of forest biodiversity is most serious, with no mechanisms to keep high conservation value forests outside increasing clear-cuts. Furthermore, there are no functional systems to protect threatened species, although there is an advanced Nature Conservation Act. Numerous occurrences of red-listed species are destroyed every year as no mechanisms exist to find them before logging. Even in cases where threatened species are found, resources to protect them are rarely available.

In the light of critical analysis, it seems clear that Finland's measures to protect biodiversity have been insufficient and hindered by increasing demands to intensify forestry. It seems that among top Finnish decision makers there is no political will to protect biodiversity, nor an understanding of what threats ignorance of biodiversity destruction impose. The crisis of forest biodiversity must be tackled with a more thorough strategy that aims at preserving forest biodiversity in Finland in the long run.

Policies of Destruction

In Finland,

- **The last remaining old-growth forests are continuously being logged by the state,**
- **Thousands of occurrences of red-listed species are destroyed every year,**
- **The Convention on Biological Diversity is being implemented with a National Forest Programme that aims at increasing clear-cuts in already intensively used forests. Increasing clear-cuts are being directed to areas where forest biodiversity is already facing a serious crisis, with no mechanisms to keep high conservation value forests outside logging.**
- **And yet, in national communications, everything seems just fine…**
- **With this report, Greenpeace wants to emphasize the urgent need to develop mechanisms to monitor the implementation of the Convention on Biological Diversity and to encourage the world's governments to take forest biodiversity destruction seriously and take action to end it now!**

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