

**National Report to the Fourth Session of the  
United Nations Forum on Forests**

**Finland**

**7.11.2003**

## **I. Key Contacts**

### **Head of Forestry in Finland:**

Name: Aarne Reunala  
Title: Director General  
Address: Ministry of Agriculture and Forestry  
P.O.Box 30, FIN-00023 GOVERNMENT, Finland  
Phone: +358 9 1605 3350  
Fax: +358 9 1605 2280  
E-mail: aarne.reunala@mmm.fi

### **UNFF national focal point for Finland:**

Name: Anders Portin  
Title: Counsellor of Forestry  
Address: Ministry of Agriculture and Forestry  
P.O.Box 30, FIN-00023 GOVERNMENT, Finland  
Phone: +358 9 1605 2418  
Fax: +358 9 1605 2430  
E-mail: anders.portin@mmm.fi

### **UNFF-Interministerial Working Group on Forests**

Chairman: Kari Karanko  
Title: Director for Environment  
Address: Ministry for Foreign Affairs  
Laivastokatu 22 C, FIN-00160 Helsinki, FINLAND  
Phone: +358 9 1605 5590  
Fax: +358 9 1605 6055  
E-mail: kari.karanko@formin.fi

### **Person to contact concerning the national report, if other than the UNFF national focal point:**

Name: Taina Veltheim  
Title: Senior Advisor  
Address: Ministry of Agriculture and Forestry  
P.O.Box 30, FIN-00023 GOVERNMENT, Finland  
Phone: +358 9 1605 2217  
Fax: +358 9 1605 2430  
E-mail: taina.veltheim@mmm.fi

## **II. Progress and issues related to implementation of IPF/IFF proposals for action**

### **General**

**1. Please provide additional or new information on initiatives taken or lessons learned since 1997 further to the information on forests included in your national reports to UNFF 2 and UNFF 3, the Commission on Sustainable Development, and other international instruments and organizations on the following points:**

- assessment (including of the relevance, priority, status of implementation, planned actions) of the IPF/IFF proposals for action in the national context
- development and implementation of your national forest programme or similar national policy framework for forests, and
- mechanisms or initiatives to facilitate stakeholder participation, including indigenous and local communities, in forest sector planning, decision-making and/or forest management.

Finland's National Forest Programme 2010 (NFP) was approved by the Government in 1999. The NFP was also accepted to the policy programme of the new Government in 2003. The aims of the NFP are directed towards securing employment and income based on forestry, assuring the diversity and health of forests, and allowing people the special kind of recreation and leisure that only the forests can offer. The implementation of the NFP has continued successfully.

One of the targets of the NFP is to increase roundwood production, which has already reached the level of 60 million cubic metres (45 mill. m<sup>3</sup> in 1990 and 49 mill. m<sup>3</sup> in 1995). According to the NFP target, the annual harvesting rate of 68 million cubic metres would be possible. Silvicultural activities such as planting, tending and thinning operations have also increased considerably. Following the aims of the NFP, the private forest owners have annually invested some 190 million euros per year on silviculture, which represents an increase of 65 million euros. The increase has been possible through increased timber sales income, state support and more efficient training and advisory activities. The increased production of forestry and forest industries has supported employment especially in the countryside.

The Forest Biodiversity Programme for Southern Finland 2003-2007 (METSU), which is co-ordinated by the Ministry of Agriculture and Forestry and the Ministry of the Environment, is an operational element of the NFP for the part of biodiversity. METSU provides a forum for experimenting with new, innovative ways of protecting the forests on a voluntary basis. The decisions on the means to be applied in the protection of forest biodiversity after 2007 will be decided on the basis of the results of these experiments.

METSU pilot projects will be implemented in order to test new protection instruments on a voluntary basis; e.g., a scheme for compensating landowners for protecting natural values, competitive bidding, and a biodiversity network. In the compensation scheme, a landowner, under a special contract, maintains or adds to the natural values in his forests, and is compensated with an income from the purchaser of the natural values, i.e. the State. In competitive bidding, the authorities ask the landowners to offer areas for protection. The best offers of the competition are approved for implementation. The METSU Programme also proposes local co-operation between forest owners so as to safeguard natural values in more extensive areas. Such networks could also include other local bodies.

Additionally, the METSO Programme includes improved advisory services, education, research and monitoring. The need for additional government financing during 2003-2007 is about EUR 60 million.

In April 2003 the Ministry of Agriculture and Forestry appointed the Future Forum on Forests (Metsäalan tulevaisuusfoorumi), which is a multisectoral and multidisciplinary meeting point aiming to generate information and knowledge on the issues affecting the sources of forest-based livelihoods in the future. The Future Forum on Forests is working in close connection with the Forest Council and its Secretariat. The purpose of the Forum is to identify expected changes in the forestry environment in the next 10-20 years. By exploring and predicting the developments affecting livelihoods in the forest sector of Finland in the future, the Forum aims to support the development of national forest policy through the NFP and other policies relevant to the future of forest sector. The Forum also aims to offer new stimuli, material and tools for the future and strategy work of the organisations related to the forest sector.

The Future Forum of Forests aims to maintain and establish new partnerships and co-operation between different stakeholders. The multidisciplinary discussions will generate information and knowledge at the Forum. Different benefits from the Forum will be considerable for organisations actively taking part in the various Forum activities. As a result future-oriented thinking within the management of different forest organisations and forest-related stakeholders will be promoted. The Ministry of Agriculture and Forestry will fund the Forum for two years and it is prepared to extend the project by three years if the results of the first period are positive.

In June 2002 the Government appointed a new Forest Council for the implementation and follow-up of the NFP. The new Forest Council also supports the Ministry of Agriculture and Forestry in extensive and crosscutting forest policy issues. The Council is chaired by the Minister of Agriculture and Forestry and the new members (21) of the Council represent a wide range of different organisations and stakeholders of the forest sector in Finland (e.g. Ministry of the Environment, Ministry of Finance, Ministry of Trade and Industry, the Forest and Wood Workers' Union, the Central Union of Agricultural Producers and Forest Owners, Swedish-Speaking Agricultural Producers in Finland, the Union of Finnish Foresters, the Society of Finnish Professional Foresters, the Trade Association of Finnish Forestry Contractors, Regional Forest Committees, Finnish Scouts, Finnish Hunters, Finnish Nature Conservation Union, WWF Finland, Finnish Sawmills, Finnish Forest Industries Federation).

In December 2002 the Forest Council appointed a Secretariat for the Forest Council. The Chairman of the Secretariat is the Director General of the Department of Forestry of the Ministry of Agriculture and Forestry and the members come from the Ministry of Social Affairs and Health, the Finnish Environment Institute, the Forestry Development Centre Tapio, Metsähallitus (which manages State lands), the Central Union of Agricultural Producers and Forest Owners, the Finnish Forest Research Institute, Pirkanmaa Forestry Centre, Finnish Nature Conservation Union and the Finnish Forest Industries Federation.

In December 2002 the Council also appointed seven follow-up groups of the NFP, which are regularly reporting to the Forest Council on their work. The chairmen the follow-up groups are members the Secretariat of the Forest Council. The follow-up groups are named according to the main chapters of the NFP, which are: 1. Good prospects for the forest industry to grow, 2. Forestry is profitable and creates employment, 3. Ecological sustainability will be secured, 4. The Forest will be well managed, 5. Forests provide recreation and nature's products, 6. Forest know-how will be strengthened, 7. Finland takes an active part in international forest policy. The follow-up groups of the NFP have broad representation of different interest groups in their respective subject areas. E.g. environmental NGOs are represented in all groups, which result in the consideration of all kinds of challenges and proposals for the development of the NFP.

At the end of 2003 the Ministry of Agriculture and Forestry appointed the new Regional Forest Councils (13), which follow-up and support the implementation of the regional forest programmes. Based on the recommendations of the mid-term evaluation of the NFP better co-operation and interaction between the regional and national forest committees has been achieved. In addition, the general discussion and dialogue on sustainable forest management in Finland has increased considerably both at national and regional levels. The Government has decided that the new revision of the regional forest programmes will start in 2004.

### **Implementation of the IPF/IFF proposals for action related to thematic issues of UNFF 4**

Please provide information on: activities undertaken since 1997, progress made, constraints encountered, lessons learned, and issues that have emerged, as well as relevant information related to means of implementation (financing, transfer of environmentally sound technologies, and capacity-building) to support the following actions:

#### *social and cultural aspects of forests*

### **2. promoting the fair and equitable sharing of the benefits arising from the utilization of forest genetic resources and addressing the issue of intellectual property rights, including the identification of the origins of forest genetic resources, taking into account work undertaken by the Convention on Biological Diversity and other international agreements**

Finland has no legislative regulations of access and rights to genetic resources.

The Finnish Ministry of Agriculture and Forestry will appoint an Advisory Board for Management and Sustainable Use of Plant Genetic Resources in 2003. The Advisory Board will follow the implementation of international commitments and national strategies related to management and sustainable use of plant genetic resources.

As a follow-up to "the Strategy for Conservation of Genetic Resources in the Nordic Region 2001-2004", a project group was established to submit proposals on how the Nordic region is to interpret the provisions in international legal instruments within the framework of co-operation on genetic resources (A Nordic Approach to Access and Rights to Genetic Resources, ANP 2003:717). The group's main recommendations and conclusions were used as basis for a declaration by the Nordic Council of Ministers (fisheries, agriculture, forestry and food issues, and environmental questions) on the access and rights to genetic resources in the Nordic region. The Council recommends the Nordic countries to determine the legal status of their forest tree genetic resources. The Council concludes that there are no convincing reasons to suggest regulations regarding the exchange of forest trees genetic resources in the Nordic countries.

### **3. strengthening the role of women in sustainable forest management, including through capacity building and greater participation in community-based forest management**

In Finland, 40 % of the forest owners are women. However, in only every fourth forest holding woman actually makes the forest concerning decisions. In many cases husbands take care of the forests or the forests are jointly owned. Since Finnish women tend to outlive men, half of the female forest owners are already retired from active working life. To this elderly group of female forest owners - many of who have not earlier been making forest concerning decisions - guidance is very important. Forestry centres and forest management associations provide special courses for female forest owners.

In 2002 a working group for forest owner women was established within the Finnish Central Union of Agricultural Producers and Forest Owners. The objective of the working group is to encourage women to active forest ownership as well as increase the number of women for instance in the councils and administrative boards of the Forest Management Associations.

Nowadays 20 % of the professional foresters are women. Since majority of the retiring foresters is men and half of the graduating foresters are women, this ratio is changing rapidly. In the field of more practical forest work there are only few female students.

The law concerning the equality of the gender demands that in the working groups set by the government and ministries a minimum of 40 % of both sexes must be presented. This promotes women to get an equal standing in the planning and decision-making concerning forests and forestry.

#### **4. integrating local and indigenous communities in sustainable forest management programmes, particularly as regards,**

##### **(a) recognition and respect of the customary and traditional rights and privileges of indigenous and local communities,**

In Finland land ownership guarantees the following rights: the right to sell timber and extractable soil resources (permit is required) and hunting rights. However, all people in Finland have the right to use forests for recreational purposes. The traditional Everyman's Right gives all people a free right to use land and water areas owned by others for hiking, picking wild berries and mushrooms, angling and ice fishing. According to the Forest Act, the maintenance and adequacy of recreational aspects of the environment must be secured whenever silvicultural operations are undertaken. Although hunting right is usually tied to land ownership, in northern Finland, local inhabitants may hunt freely on State land, except when some restrictions are placed on the use of the areas (e.g. in strict nature reserves). On State land and on land owned by major cities, in the preparation of management plans for forest close to or in built-up areas, the inhabitants, village committees and other local organisations participate in the process in its various stages.

The reindeer husbandry area is located in the northernmost areas of Finland and it covers one-third of the entire area of the country. Reindeer herding has maintained its position well and is an integral part of Sami culture. Some 30 % of the reindeers are owned by the Sami people. The Government has worked to ensure the Sami's rights as an indigenous people to maintain and develop their culture and traditional livelihoods. Reindeer husbandry is regulated by legislation, which was passed for the first time in the 1930s. According to the Reindeer Husbandry Act (1990), Metsähallitus (which manages State lands) and the other State authorities must negotiate with the reindeer-grazing associations before any action that may essentially affect reindeer husbandry. The Act on Metsähallitus (1993) also states that natural resource management in the Sami Homeland area (the areas of the municipalities of Enontekiö, Inari and Utsjoki and the northern part of the municipality of Sodankylä) must be done in a way that does not cause harm to the traditional livelihood and culture of the Sami.

##### **(b) participation in decision making regarding the management of forests,**

The preparation of large-scale forest projects or programmes in Finland generally takes place within working groups, in which the various interest groups are represented. Such interest groups include forest owners, forest industry, forestry employee organisations, trade unions, hunters, reindeer husbandry and tourist industries, NGOs, environmental organisations, local people and public authorities. For example,

in the preparation of the National Forest Programme 2010 (NFP) in 1998-1999, national public forums were attended by nearly 3,000 citizens. An opportunity to participate in the preparation of the programme over the Internet was also made available. In the continuing development of the NFP (revision and updating) citizens will again have an opportunity to participate, because in addition to the National Forest Council, its ad-hoc working groups and the Future Forum on Forest, public forums will also be a part of the programme's reorientation. Furthermore, the Regional Forest Programmes were prepared in an open process of co-operation with interest groups and stakeholders. There are 13 Regional Forest Councils with wide stakeholder participation following the implementation of the regional forest programmes. According to the Forest Act, regional forest programmes are updated at regular (max. 5 years) intervals.

Another example of participation is the planning process for state forests. The Finnish State owns about a quarter of the country's land area, i.e. some 9 million hectares. Of this, 3.3 million hectares are in commercial forestry use. Metsähallitus, which is responsible of managing these forests, has adopted the idea of public participation to ensure that citizens' views are heard in the process. Metsähallitus applies regional Natural Resource Plans (NRMP) and Landscape Ecological Plans (LEP) for the state-owned land area. Metsähallitus tries to draw the plans in an open and interactive way. The objectives of citizen participation are to avoid conflicts or handle them constructively, and to improve the quality of plans by enhancing the information sources. Metsähallitus includes stakeholders and local people in the planning process by organising stakeholder meetings, establishing monitoring and steering teams, and by delivering information on the planning process.

#### **(c) the attainment of secure land tenure arrangements,**

In Finland land tenure was defined in the general parcelling out of land done in the 18<sup>th</sup> and 19<sup>th</sup> century. At present, 61 % of forestland is owned by non-industrial private forest owners, 9 % by companies, 25 % by the State (governed by Metsähallitus) and 5 % by others.

A part of the indigenous Sami people are private land owners. However, 90 % of the Sami Homeland area is owned by the State. There is a prolonged dispute related to the land rights in this area. The Sami Parliament sees that the Sami should have the rights for the area. Several attempts to resolve the question have been made in co-operation between the Government and the Sami Parliament. At the moment this conflict of opinions remains unsolved.

Related to the dispute of land rights is the dispute between different land uses. The reindeer owners' associations claim that the forestry measures of Metsähallitus cause harm to reindeer husbandry. In 2002 the Ministry of Agriculture and Forestry assigned a working group to determine the main reasons for the conflict. The group finished its work in July 2003 and gave a report of possible consolidation measures.

#### **(d) capacity building and technology transfer for sustainable forest management directed at indigenous and local communities**

Advisory and information services help forest owners in their decision-making as they seek to manage their forests in a way that ensures that the various aspects of sustainability are taken into account. There are about 440,000 private forest holdings in Finland, and nearly 900,000 individual citizens own forests. The nation-wide network of Forest Management Associations - 195 associations with offices in 339 communes and a permanent staff of circa 1750 forestry professionals - ensures on statutory basis forest advisory services for all forest owners. Advisory and training services for forest owners are also provided by the Regional Forest Centres and several other organisations, including the Metla (Finnish Forest Research Institute), forest polytechnics and schools, and forest industry companies.

Advisory and information services are provided in the forms of publications, newspaper articles and other

printed material, personal consultation, and constantly developed by introducing new forms and procedures, such as Internet services designed for forest owners. Information on forestry is also distributed through consultation and service offices established in cities and built-up areas, as well as in conjunction with courses and other training events.

The Forest Management Associations provide individual consultation for over 70,000 forest owners every year. The Forest Centres also provide personal consultation funded with State grants for over 30,000 owners annually, and organise about 700 seminars every year, with participation by over 30,000 forest owners. In accordance with the target of the National Forest Programme 2010, the amount of State funding used for advisory services for forest owners has been doubled.

### *traditional forest-related knowledge*

#### **5. inventorying, cataloguing, and applying traditional forest related knowledge for sustainable forest management and promoting research on TFRK with the involvement of the knowledge holders**

Evaluation of this issue has proven to be difficult in Finland. The concept of forest ownership was established during the general reparcelling of land in the 17<sup>th</sup> and 18<sup>th</sup> centuries and thus forest ownership has a long tradition. Forest property has often stayed in the possession of the same family for centuries. Therefore, the private forest owners' role in issues concerning TFRK, in addition to that from indigenous people, must be emphasised. The viewpoints of forest owners are taken into account in connection with all issues related to forest management. Metsähallitus is practising participatory forest planning and thereby giving local communities the opportunity to participate in planning the management of state owned forests. Representatives of private forest owners' organisations and Sami people took part in the preparation of the NFP and are involved in the evaluation processes.

#### **6. supporting the application of intellectual property rights and/or other protection regimes for traditional forest related knowledge, and the fair and equitable sharing of benefits arising from the use of traditional forest related knowledge, innovations and practices**

Not applicable (see the previous answer).

### *scientific forest-related knowledge*

#### **7. disseminating scientific knowledge to all interested parties, including through new and innovative ways, and strengthening capacity and mobilizing funding for national and regional research institutions and networks**

National and international networking has rapidly increased in educational and training activities. Objective oriented management in use at all the universities has resulted in changes. The role of the polytechnics has focused towards the training of practically oriented university level personnel and practically oriented research. The possibilities of modern IT have been realised through virtual and distance education. The Virtual University of Finland and The European Virtual Faculty of Forestry are good examples of international networking between forestry universities through the European Silva-network. Good examples of networking at a national scale are the graduate schools and the centres of excellence, which also endeavour to enhance international networking.

The Centres of Expertise Programme in Finland apply the utilisation of top-level regional knowledge and expertise as a resource for business operations, for improving employment and for regional development. This is aimed through building joint strategies between partners such as universities and research institutes, science parks, companies, regional administration and cities as well as municipalities. Forestry issues are related into several fields of national expertise, such as forest expertise, material technology, paper production, wood products and energy. The programme includes both regional and national networks.

Technology Centres are efforts of the municipalities to increase the knowledge and technology transfer into industrial production and investments. Despite the regional scope they also support the network of the industry at national and European levels.

Many of the political processes and programmes are related to structural and regional development programmes in the European Union. The European Union development funds have an important role in the realisation of the Centres of Expertise Programme and Technology Centres in Finland. Special forest programmes have also been created inside of the Barents Euro-Arctic Council ([www.barents.no](http://www.barents.no)) and An Agenda 21 for the Baltic Sea Region. The Barents Euro-Arctic Council has also initiated the Forest Sector Task Force for the Northern Dimension which aims at creating the necessary conditions for development of forestry, environmental care and wood-based industries through co-operation, mutual concrete actions, projects and programmes within the forest sector of the Barents region. Agenda 21 has been realised as the Baltic 21 Action Programme for Sustainable Development of the Baltic Sea Region – Sector Report on Forests that aspire to strengthen economically, ecologically and socially sustainable forestry through international co-operation in the Baltic region.

The Scandinavian countries have taken new initiatives aiming for more strategic co-operation in forestry. The Finnish Forest Cluster Research Programme, WOOD WISDOM, was established to raise the competitiveness of forestry and the forest industry in Finland. The second phase of the program consists of two sub-programmes: the Wood Material Science Programme and the Transfer of New Knowledge and Technology from its Producers to the Users. The goal of the international Wood Material Science Programme is to establish a sound knowledge base in order to enable the development of innovative forest-based products and to add value to the wood product industry. The programme starts as a Finnish-Swedish joint programme. The Intention of funding organisations is to expand the co-operation to a European level and even beyond that to encompass North America and Japan.

The new research strategy of the Academy of Finland, outlined for the years 2003-2007, aims at promoting research focused on a defined subject area or set of problems in close co-operation with other funding bodies and end users of research results. By combining different organisations complementary funding profiles, is possible to cover the different research aims from high quality basic research (the main role of the Academy) to technology research (the role of the TEKES) and forestry know-how (the financing role of the Ministry of Agriculture and Forestry) in a way, that activates the whole innovation chain of forest cluster.

The co-operation between international research organisations like the European Forest Institute (EFI), and strong domestic research organisations like Metla form a fertile basis for international networking disseminating scientific knowledge.

**8. enhancing interaction between scientific research and policy processes, including priority setting of research, addressing of knowledge gaps and using scientific knowledge to support decision-making**

Finland has a long tradition of applying national forest programmes as a basis of national goal setting in the forestry sector. The present National Forest Programme 2010 forms the basis for the national forest policy of Finland and aims to ensure the future of forestry related livelihoods, incomes, biodiversity and vitality of forests, as well as guarantee the non-wood goods and services from forests for all the citizens. In addition to the NFP, the regional forest programmes combine the information and regional aims from all the interest groups. The research community has participated in the forest programme formulation at both national and regional levels.

Networking is taking an important role for funding and priority setting in forestry related research. The research donors are aiming for larger research entities by funding a great deal of research through joint specific research programs. In forestry related research, good examples are: The Value Added Wood Chain, which is a technology programme launched by the National Technology Agency, and the Sustainable Use of Natural Resources, by the Academy of Finland. There are also several forestry-related networks created by research organisations, such as the NORNET. It is a co-operation network of the northern Finnish environmental researchers that aim to support, integrate and profile northern research, expert and laboratory services and education.

The Forest Forum for Decision-Makers is a good example of interaction between science and policy processes and between different sectors. It is a course and discussion forum on forest issues, directed at top-level decision-makers throughout the society. Since 1996, the Government has funded and the Finnish Forest Association organised 16 forums, with 25-30 participants on each of them. The Forum aims at improving the readiness of the participants to make far-reaching decisions on multi-dimensional and international forest issues. Additionally, the Forum aims at motivating and discovering new methods for the forest sector to support the resolution of societal problems of general importance. The decision-makers at the regional level plan to adopt the same working model.

Another example of a link between forest science and decision-makers are the councils of the research units in the Finnish Forest Research Institutes. They are formed by the representatives of the different forestry interest groups in the region of each unit. They work for targeting research and strengthening co-operation between different research bodies, and between research and practice. The similar councils are also working for the Technology Centres mentioned in chapter 7.

The Future Forest Forum, as part of the NFP, is a new initiative, aiming to enhance future research in forestry. The time scope of the forum is 10-20 years and it is supporting the long-term forest policy making and future planning of the forestry organisations in Finland. At an International level, the Baltic and Barents region initiatives, mentioned in chapter 7, have similar objectives in a broader international context.

### ***monitoring, assessment and reporting, concepts, terminology and definitions***

#### **9. improving information on national forest resources, making the information widely available, and assisting other countries in their related efforts**

The Finnish National Forest Inventory (NFI) is one of the world's oldest inventories based on sound statistical design. The first inventory was carried out 1921-1924. The complete results were published in 1927, as the first in the world. The inventory is under continuous development and, e.g., satellite images were taken into operational use as first in the world, in 1990.

NFI results have been traditionally used for national and international statistics and time series, such as those published by UN/ECE, FAO GFRA and TBFR process, OECD, MCPFE and UNFCCC. Other,

domestic, uses are region-level and country-level forest management planning, forest policy, forestry programs, planning of forest industry investments, nature conservation policy forest research.

The introduction of satellite image aided Multi-Source National Forest Inventory (MS-NFI) has made it possible to use inventory information also for other than traditional purposes. Examples are planning of timber procurement, impacts of forestry on biodiversity, role of forests in global carbon balance, forest certification and municipality level forest management planning.

There is also another forest inventory system in Finland, called management inventory, providing data for forest holding level decision making. Its annual cost is much higher than those of MS-NFI. Ministry of Agriculture and Forestry, i.e., the financier of those inventories, is interested in reducing the costs of those inventories. One possibility is to utilise MS-NFI data as information basis.

The forest inventory results are computed and reported immediately by regions (Forestry Centres) after the measurements have been carried out in Metla's (Forest Research Institute) journal *Metsätieteen aikakauskirja / Folia Forestalia*, see 1998/2B - 2003/2B, in Finnish Statistical yearbook of Forestry (also on web, [www.metla.fi/metinfo/index-en.htm](http://www.metla.fi/metinfo/index-en.htm)), and the municipality level results also on web under Metinfo, see above. The main results appear also in FAO's books and databases.

The current inventory is as follows. About 70 000 plots are measured in the entire country during one rotation. With field plot data estimates and results are computed for Forestry Centres sub-areas of Forestry Centres, e.g. for areas larger than 300 000 ha. These results involve area and volume estimates, e.g., areas of land use classes, tree species dominance, age and maturity classes, carried out and needed silvicultural and cutting regimes, silvicultural status of forest, components of biodiversity, etc., volumes and increment by species and timber assortment classes. With MS-NFI, i.e., with field plot data, satellite images and digital map data area and volume estimates are computed for municipalities (with the size of a magnitude 10 000 ha), and by request for forest holding level (around 50 ha). MS-NFI produces also digital wall-to-wall thematic maps. The Finnish MS-NFI is the first country level inventory utilising satellite images in an operative way.

When the NFI9 was launched in 1996, some changes were made. Examples are: in addition to domestic definitions, forest land (FL), other wooded land (OWL), and other land (OL) are assessed in the field using FAO definitions. Examples of new biodiversity variables are: key habitats, amount and quality of decaying wood, trees left in regeneration cuttings for maintaining biodiversity, improved site and soil description, and in the computation phase, landscape ecological analysis.

NFI10 will be launched in 2004. Changes in the system are: moving to a 'rolling system', i.e., 20 % of the plots in the entire country measured each year. This increases the annual budget by 300 000 euros. Part is promised to be covered by the ministry of Agriculture and Forestry. The reasons for the new system are: 1) need for country level and basic district level statistics annually, 2) need for district level complete statistics every 5th year, 3) need for MS-NFI based forest maps every second year. There is no need for new parameters: e.g. biodiversity, forest health and carbon budget related parameters, because they are already included in the measurements and reporting. Variables and concepts are harmonised for FAO definitions, Nordic and European level harmonisation processes are going on.

The cost per hectare of the Finnish NFI is lowest among countries with advanced and statistically sound national forest inventories. The costs per hectare in the other, comparable countries are usually at least 2,5 times as high as in Finland.

Finland participates in many international activities in this area. One of them is the European level ENFIN process, which was established in 2003. The purpose of the process is to harmonise European

level national forest inventories in such a way that they can provide comparable forest resource information. The co-ordinator of the Finnish NFI programme is a member of the steering group of ENFIN. Finland also has a representative in the FAO and UN/ECE Team of Specialists and assists FAO in Forest Resource Assessments.

The Finnish Game and Fisheries Research Institute is responsible for monitoring large mammal species and game birds. The sustainable management of game species is based on these statistics. The populations are managed by enforcing closed seasons and hunting quotas, which are set by the Ministry of Agriculture and Forestry.

The wildlife triangle census is the main tool for monitoring forest wildlife populations. The census, started in 1988, has three main objectives: 1) To improve sustainable harvest using bag recommendations based on annual census data. 2) To obtain in depth knowledge on habitat requirements of different wildlife species and their response to changes in the environment. 3) To incorporate as many wildlife species as possible into the same monitoring scheme. The wildlife triangle is a triangle-shaped census line. The side of a triangle is 3 km, thus giving a total line length of 12 km for each triangle. The triangles are mainly located on forest land, and on one sheet of a topographic map (1:20 000). Borders of the triangles are permanent, and marked for easy orientation during census. The field work in this extensive monitoring scheme is done entirely on a voluntary basis. Some 5 000 hunters participate in the census work. The 900 triangles are counted twice each year.

Another basic task of the Finnish Game and Fisheries Research Institute is to increase our understanding on the biology and state of reindeer stock, state of reindeer pastures and other factors affecting the reindeer population. This information is used to promote sustainable reindeer husbandry in Finland.

See [www.rktl.fi/english/index.html](http://www.rktl.fi/english/index.html) for further details on monitoring forest wildlife and reindeer populations.

Since 1997, Metla has collected nation-wide information about the yields of wild berries and mushrooms. Metla has 1250 permanent research plots in 250 different forests and peatlands. Inventory is done on these plots 3 times per growing season. 160 people participate in this work. Based on this information, Metla gives nationwide as well as regional forecasts about the yields of berries and mushrooms. The annual production of wild berries is 200-400 million kg. Approximately 2 million Finns pick berries for their own use every year. However, only some 5-10% of the yield is picked. For mushrooms this figure is even smaller; only some 6 million kg of edible mushrooms is picked annually while the production is 350-1000 million kg.

For Metla's webpages on yield forecasts and re-creational use of forests, see [www.metla.fi/metinfo/monikaytto/index-en.htm](http://www.metla.fi/metinfo/monikaytto/index-en.htm).

At the moment, Finland supports conducting national forest inventories and publishing the results of the inventories in Mozambique and in Namibia. In Namibia, an inventory has been made in almost all forested states as part of the Finnish development co-operation. In Mozambique, an inventory has been made in two provinces.

### *criteria and indicators of sustainable forest management*

- 10. developing and using criteria and indicators of sustainable forest management (at national level and/or subnational level and for policy, planning, management and/or monitoring purposes), and participating in regional and/or international C&I processes**

In Finland, work on the preparation of the first set of national criteria and indicators for sustainable forest management was launched already in 1994, and the first report was completed and published in 1997. The Pan-European criteria and indicators for sustainable forest management developed within the follow-up of the Helsinki Ministerial Conference on the Protection of Forests in Europe provided a framework for the development of national criteria and indicators.

Revision and further development of the Finnish criteria and indicators were initiated in August 1998 as new scientific information and practical experiences of the applicability of the criteria and indicators became available. It was also important to take into account the development of international forestry processes (e.g. IPF/IFF proposals for action, the Lisbon Resolution L2). Representatives from 13 different organisations such as ministries, research organisations, forest industries, forest owners, universities and non-governmental environmental organisations took part in this work. The work was finalised at the beginning of 2001, when the report "The State of Forests in Finland 2000 – Criteria and Indicators for Sustainable Forest Management in Finland" was published (see [www.mmm.fi/english/publications](http://www.mmm.fi/english/publications)).

In the follow-up process of the Ministerial Conferences on the Protection of Forests in Europe the Pan-European Indicators for Sustainable Forest Management have been further improved and a revised set was endorsed in the Vienna Ministerial Conference in April 2003. The Finnish national set of indicators is currently under review for further improvements based on the Pan-European set.

In Finland, criteria and indicators for sustainable forest management contributed to the formulation of the National Forest Programme and its implementation. Some biodiversity indicators are used in the monitoring of the Regional Forest Programmes.

The Government of Finland co-sponsored and contributed to the International Conference on the Contribution of Criteria and Indicators for Sustainable Forest Management: The Way Forward (CICI-2003), which was held in Guatemala in February 2003.

### **III. Preparation of the Report**

- 11. Describe the process of preparing this report, including which government agencies and stakeholder groups were involved, and the extent to which they contributed. Provide information on successes, challenges and lessons learned in the preparation of this report.**

The preparation of this report has been co-ordinated in the Ministry of Agriculture and Forestry. Considerable contributions to the writing of the report were made by Metla (the Finnish Forest Research Institute), the University of Joensuu and the Ministry for Foreign Affairs. The draft report was commented on by the members of the UNFF-Interministerial Working Group on Forests and the Committee on International Forest Policy, which includes representatives of different stakeholders.