



Finland's National Forest Programme 2010 Follow-up report 2005–2006



National Forest Programme 2010

Follow-up report 2005–2006

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Wood is a stylish building material (Photo by Martti Kainulainen).

The habitat for the rare pasque flower, found in Häme, is sunny ridges. (Photo by Antti Below).

The control cabin of a harvester looks like the cockpit of an aircraft and calls for high levels of skill from the operator. (Photo by Ponsse Oyj).

There is a demand for recreational services in forests. The photo shows walkers in the Karkali Strict Nature Reserve. (Photo by Ahti Kotisaari).

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Foreword

Finland's National Forest Programme (NFP) 2010 was ratified by the Government in 1999, and since then its implementation has been included in the Government Programmes. There have been major changes to the forest sector's operating environment, which is why a review of the programme was begun in the autumn of 2005. In September 2006, following some thorough preparatory work, the National Forest Council approved the 'Forest Sector Future Review: Outlines of the Forest Council concerning focuses and aims for the forest sector', which would serve as a basis for the new National Forest Programme 2015.

The implementation of the NFP has continued in conjunction with the review work because the issues which have been found to be important in the Programme, such as the forest industry's potential for growth, a forest economy which is both profitable and which provides work, and the ecological sustainability of forests, have not become any less significant as the operating environment has changed, but rather the opposite.

The National Forest Programme 2010 has been drawn up and implemented through broadly-based co-operation at both national and regional level. The Regional Forest Programmes were reviewed in 2005 for the period 2006–2010. Their implementation was begun within the framework of available resources. The Programmes' biggest contribution is the message from the regions they contain regarding what issues are important from the point of view of the development of the forest sector in the updating of the NFP.

The structures involved in the Programme's implementation make for excellent forms of co-operation. The process might be called a dialogue process for the entire forest sector, thanks to its transparency and the diversity of the backgrounds of those involved. People from the Government, business, stakeholder groups and other social partners, such as environmental conservation organisations, are represented in the National Forest Council, and in its Secretariat and Working Groups, as well as in the Regional Forest Councils. When the new Forest Council and its bodies were appointed in 2005, special attention was paid to the cross-sectoral nature of the National Forest Programme project and the importance of skills and know-how for the development of the forest sector. Various bodies also included representatives from different administrative sectors, research and organisations interested in the recreational use of forests. The new make-up of bodies has made it possible to diversify the debate and coordinate measures as the new Programme has been planned and the old one implemented.

The implementation and impact of the National Forest Programme 2010 is being monitored in the form of follow-up reports, as well as in other ways. This follow-up report for the period 2005–2006 describes general trends in the sector, the measures undertaken to achieve objectives, and the findings from an evaluation of the Programme conducted in 2005. The follow-up report was the work of the Forest Council's Secretariat and the chairpersons and secretaries of the Working Groups reporting the opinions of their members. The report was approved by the Forest Council.

I wish sincerely to thank all the bodies and people involved in the implementation of the National Forest Programme 2010 and the production of this follow-up report for their valuable and excellent work.

Helsinki 22 March 2007

Juha Korkeaoja
Minister of Agriculture and Forestry

Abstract

2005 was an unusual year for production in the forest industry, owing to the seven-week long dispute over contracts of employment in the paper industry. There was a 12% drop in pulp, paper and cardboard production and sawn timber production was down by 9%. In 2006, thanks to a healthy market and a new collective agreement, production of pulp, paper and cardboard rose to a new record. The production of sawn timber remained at 2005 levels, owing to difficulties in raw materials management.

The target to double the value of exports in the wood products industry set in the National Forest Programme is not being reached. In 2005 the value of exports dropped owing to low prices and a fall in volume, but a trend towards higher prices in 2006 pushed the value of exports up to 2.7 billion euros. However, that is just 56% of the target set. A more positive trend is reflected in the fact that domestic use of the wood products industry remains at a high level and that the degree of processing (quality grade) of wood products is rising.

The consumption of roundwood in industry decreased to 67.8 million cubic metres in 2005. This was 9% down on the previous year and applied mainly to domestic roundwood (consumption of 49.9 million cubic metres). The consumption of wood in industry rose in 2006 to 54.6 million cubic metres. The volumes of imported wood in both years were high owing to low prices and reduced availability on the domestic market of certain timber grades. In 2005 17.9 million cubic metres of imported wood were used and the figure for 2006 was 19.3 million.

Unless special measures are introduced, the logging outturn target for domestic wood (including firewood) in the Forest Programme of 63–68 million cubic metres a year will not be achieved. Logging outturn for domestic wood totalled 58.7 million cubic metres in 2005 and some 59 million cubic metres in 2006. The average figure for the period 2000–2006 is 60.2 million cubic metres.

Roundwood prices have been climbing since 2005. Diminishing harvests and the emphasis on pulpwood in felling have nevertheless lowered stumpage earnings from private forests. At the same time, the real profitability of forestry (net income per hectare) fell to 86 euros in 2006.

Employment trends in the forest sector have been more favourable than what was forecast when the National Forest Programme was being drawn up. In 2005 the number of employees was 96,100 and in 2006 around 95,000, the yearly average for the period 2000–2006 being 93,000. The healthy situation regarding employment is due to increased silviculture (forest management), the increase in the harvesting of forests for energy and steady employability in the wood products industry. In future the challenge will be to ensure there is available labour as the number of people of working age decreases and the forest sector's operational environment changes.

The implementation of the Forest Biodiversity Programme for Southern Finland (METSO) continued successfully. Natural values trading, competitive tendering and co-operation networks were tried out to the extent planned, as was also land acquisition for conservation purposes by Metsähallitus on the basis of tenders. November 2006 saw the completion of the Programme's monitoring and evaluation. That had been preceded by the release of the research report on the Forest Biodiversity and Monitoring Programme MOSSE (2003–2006) in September 2006. As a result of the 'dialogue process', Metsähallitus decided to protect 100,000 hectares of forest and mire areas in northern Finland in June 2006.

In early 2005 Finland's National Strategy for Adaptation to Climate Change appeared and in 2006 the Programme for Research into Adaptation to Climate Change 2006–2010 was initiated. In November 2005 the Government presented the Parliament of Finland with a report on energy and climate policy, with details of approaches to increase the use of wood-derived energy. In December 2006 the Government confirmed its policies according to which Finland would apply a forest management measure for the first commitment period of 2008–2012 under the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

In 2005 the positive trend that had long been conspicuous in silviculture and basic improvements to forests came to a halt. The tending of seedling stands and ditch cleaning and supplementary ditching declined, due to a fall in the real value of aid under the Finnish Act on the Financing of Sustainable Forestry as well as the repercussions of the weak market in wood. In contrast, the overall use of forest chips has risen in accordance with the objectives set out in the National Forest Programme and reached approximately 3.4 million cubic metres in 2006. The complete reform of the Act referred to was also concluded and the Act was passed in January 2007.

The idea of forests for recreational use has continued to grow, with support coming from such agencies as the Outdoor Forum of Finland and through the implementation of the VILMAT Programme and the development of e-services.

There has been closer co-operation between R&D and training. The Government Resolution on the Structural Development of the Public Research System, the Finnish Forest Cluster Research Strategy, the centralisation of top expertise on forest clusters, and centres of excellence are examples of the policy decisions that have been taken. The availability of a professionally skilled workforce has become a more important issue than before.

International co-operation on forests has continued to be dynamic both in the form of multilateral co-operation., e.g. UNFF6, monitoring and preparatory work at conferences of European forestry ministers, action on the part of the European Union, and bilateral forms of co-operation as well.

The Regional Forest Programme work and the work of the Forest Councils have continued to develop favourably. The new Regional Programmes for the period 2006–2010 were drawn up in 2005. Co-operation between the National Forest Council and the Regional Forest Councils has become closer.

1. Main features of the National Forest Programme 2010

The Finnish Government ratified the National Forest Programme 2010 in March 1999 and the decision on its implementation was made in November that same year. In May 1999 the Government had appointed a broadly based Forest Council, whose task it would be to support the Ministry of Agriculture and Forestry in matters of forest policy that are far-reaching in nature and important in principle. It would also monitor implementation of the Forest Programme and make proposals for developing the Programme economically, ecologically and socially as a balanced whole. The present Council's term began in June 2005 and ends in August 2008. The Council has 23 members.

The Forest Programme has a number of objectives. One is to increase the annual consumption of domestic industrial roundwood (merchantable timber) in the forest industry by 5–10 million cubic metres to 63–68 million cubic metres by the year 2010. The other objectives are to double the value of wood product industry exports to 4.2 billion euros a year and increase the use of wood for energy to five million cubic metres a year by that same year. The state will work in collaboration with companies and entrepreneurs to ensure that conditions are right for the forest industry. This includes ensuring that the price of energy is competitive, that the road network is in good condition, and that the necessary technological and development programmes are in place in order to develop energy from wood.

If the logging output of industrial roundwood is to be raised, overall investment in forest management and improvement under the Forest Programme will need to be increased to around 250 million euros a year. The forest owners' share of that increase would be 67 million euros and the other 17 million euros would consist of state and EU financing. The state will invest particularly in forest planning and guidance and training for forest owners. The increase in production will encourage employment in forestry and the forest industry, raising it by 10,000–15,000 person work years, although as productivity increases employment in the forest sector is predicted to go down from 95,000 to 80,000 person work years by the year 2010.

The ecological sustainability of forests will be protected by developing the environmental management of commercial forests, with reference to the Environmental Programme for Forestry endorsed jointly in 1994 by the Ministry of Agriculture and Forestry and the Ministry of the Environment, and its audits. The aim is for the appropriations for the management of forest nature to be increased and forestry's environmental load to be reduced by virtue of the Government Resolution on the Protection of Waters. Well-established conservation programmes on private land will be realised in the period 1996–2007 by means of a funding programme worth 600 million euros. A broadly based working group will also be set up to undertake an assessment, based on research, of the need for forest conservation and to draw up an objective, financing and action programme for the conservation of forests from the economic and social perspective. The programme will apply to southern Finland, western parts of the province of Oulu and southwestern Lapland.

There will be more forest management work particularly in two areas. One is young stand improvement, where the annual target will go up from 150,000 to 250,000 hectares. The other is ditch cleaning and supplementary ditching, where the annual target will increase from 75,000 to 110,000 hectares. The priority for forest roads will no longer be the construction of new roads but basic improvements to existing ones. There will be improved monitoring of forest and environmental management as well as damage caused by harvesting.

Hunting, reindeer husbandry, picking berries, mushrooms and other vegetation, scenic and cultural values, outdoors recreation, tourism and other forms of the multiple use of forests will be taken into consideration and promoted alongside the use and protection of forests.

The NFP goal is to improve forest expertise and boost innovation in the forest sector by developing research, putting the findings of that research into practice, and training. There will be more interplay between those who produce data and those who use it, with the establishment of a Forest Sector Innovation Forum. A dynamic international forest policy, international co-operation on research and training relating to forests, and communications on forests and the environment will serve to safeguard Finnish interests and promote sustainable forestry.

2. Interim evaluation of the National Forest Programme 2010

In spring 2005 JP Management Consulting (Europe) Oy undertook an interim evaluation of the National Forest Programme 2010 on behalf of the Ministry of Agriculture and Forestry¹. The aim of the evaluation was to discover the extent to which the objectives set for it had been achieved, and to examine how well the NFP complies with the European principles determined for national forest programmes. Another aim was to determine any development needs and make recommendations for the future development of the Programme. The measures selected for each objective as well as the adequacy of their range are assessed and development proposals are put forward relating to the objective itself, the measures chosen, monitoring and follow-up and the additional remarks made.

The interim evaluation showed that some major progress was discernible in the achievement of the objectives set for the NFP. However, the Programme's most recent target areas were found to include specific sectors where the achievement of the 2005 objectives seemed uncertain. The main reasons for this, according to those conducting the evaluation, are the changes in the operating environment and market conditions, resulting in a situation where the NFP measures have proven to be inadequate. The Programme's actual objectives were thought to be set at a very general level (e.g. in relation to recreation, forest know-how and international forest policy), which makes it difficult to assess the extent to which they have been achieved.

The main positive developments were considered to be the following:

- Domestic industrial roundwood consumption had increased from 53.4 million cubic metres in the late 1990s to 57 million cubic metres in 2003. Annual logging outturn had increased correspondingly.
- The consumption of wood for energy wood had increased steadily to around 2.5 million cubic metres in 2004.
- The Forest Biodiversity Programme for Southern Finland 2003–2007 (METSU) had been launched and there had been considerable investment in biodiversity-related research and inventories.
- Public financing for silvicultural and forest improvement work had increased in line with NFP targets.
- Finland had been an active player in international forest policy and development.

The most challenging of the NFP objectives were thought to be those set for an increase in the value of exports of wood products and also in the consumption of domestic industrial roundwood. It was thought that, to achieve these objectives, a wider range of measures were needed, resulting in a possible improvement in the availability of domestic industrial roundwood and in the competitiveness of the Finnish forest industry. As for the ecological objectives, the evaluation report stressed the need to implement the nature conservation programmes and step up nature conservation in southern Finland and the need to reduce nitrogen leaching. With regard to the silvicultural (forest management) measures, attention needed to be paid to first thinnings and ditch cleaning and supplementary ditching, to take two examples. There also needed to be more efforts made to promote the recreational use of forests and nature and nature tourism. Table 1 gives a summary of the findings of the interim evaluation.

¹Interim Evaluation of the National Forest Programme. Final report. 2005. Ministry of Agriculture and Forestry, Min. Ag. Publications 5/2005.

Table 1. Achievement of the National Forest Programme's objectives and the main challenges involved ²

Objective	Targets achieved by mid-term	Main challenges
1. Opportunities for growth in the forest industry	Consumption of domestic industrial roundwood*	Wood product industry's exports; short-term development of wood consumption
2. Profitability of forestry and employment opportunities	Wood for energy; annual logging outturn*)	Short-term development of logging outturn
3. Ensuring ecological sustainability	Forest Biodiversity Programme for Southern Finland 2003-2007 (METSU); financing of research and inventories	Implementation of nature conservation programmes; nitrogen leaching; decision on the need for a nature conservation programme for southern Finland
4. Silviculture	Fertilisation of forests; basic improvement of forest roads; young stand improvement; state aid	First thinnings; ditch cleaning and supplementary ditching
5. Forest recreation and natural products	Multiple use of forests	Determining areas of responsibility; ensuring adequate funding for recreation; extension of the knowledge base
6. Development of forest know-how	Future forum for the forest sector	Diversifying and broadening training and research; international communications; future-oriented research
7. Finland active in international forest policy	Active participation and co-operation internationally, bilaterally and within the EU	Development co-operation funds

*) Domestic industrial roundwood consumption and annual logging outturn have increased in line with targets when current figures are compared to the average for 1995–1999. However, felling and domestic roundwood consumption have not increased since 1999 during the NFP Programming period.

The NFP's actual programme process was found to be viable. The Programme was felt to be steering the Regional Forest Programmes fairly successfully, and these regional programmes were considered to have been a success in the implementation of the Forest Programme's objectives. There were thought to be areas for improvement in the Programme's scope for promoting proposals for measures in its follow-up reports. The Programme was also found to have limited potential for influencing industrial actors. The NFP had enhanced interministerial co-operation on the forest sector. The Regional Forest Programmes had also clearly fostered co-operation between stakeholders involved in the regional development processes. The evaluation report suggested, too, that the NFP was complying successfully with the European principles that apply to national forest programmes at both national and regional level.

The survey undertaken with stakeholders in the evaluation process suggested that the NFP had encouraged involvement, co-operation and partnerships and fostered expertise, consistency of national legislation and national policies, as well as taking account of the ecosystem approach.

The main areas for improvement relate to developing mechanisms for conflict management, improving the effectiveness of the NFP in terms of its influence on strategies and allocation of resources in other sectors, on strengthening the long-term commitment of actors, and on developing knowledge management (e.g. utilisation of follow-up data, awareness-raising relating to forest issues).

² Interim evaluation of the National Forest Programme. Final report. 2005. Ministry of Agriculture and Forestry, Min. Ag. Publications 5/2005.

3. National Forest Programme 2010: realisation of objectives and implementation of measures 2005–2006

3.1. Opportunities for growth in the forest industry

The aim of the National Forest Programme 2010 is to keep the forest industry in Finland viable and competitive, enabling it to increase the annual consumption of domestic wood by 5–10 million cubic metres by the year 2010. Its aim is also to double the value of exports of wood products by the same year.

3.1.1. Trends in production in the forest industry

The seven-week long dispute over contracts of employment in the paper industry in 2005 resulted in stoppages which took their toll on production throughout the entire sector (Diagram 1). Paper and cardboard production fell from record levels in 2004 to 12.4 million tonnes (-12%) and pulp production went down to 11.1 million tonnes (-12%).

The production of coniferous sawn timber fell to 12.2 million cubic metres (-9%) in 2005. Production dropped owing to a halt in the supply of wood chips from sawmills to chemical pulp mills. Moreover, barely lucrative sawing capacity was closed down, which contributed to the fall in production. The production of timber panels decreased to 1.9 million cubic metres (-2%).

In 2006 production in the paper industry grew to a new record following the slump caused by the labour dispute in 2005. A new contract of employment and an increase in demand for products contributed towards an increase in the capacity utilisation rate. Paper and cardboard production reached 14.1 million tonnes (+14%). Pulp production rose to 13 million tonnes (+17%). Of this, chemical pulp accounted for almost eight million tonnes.

In 2006 12.1 million cubic metres of sawn timber was produced, production thus remaining at the previous year's levels despite the good growth in demand. There were difficulties in the supply of raw material owing to a slow-down in the timber market at the start of the year and a prolonged period of poor road conditions in the autumn. But for the problems of raw materials management, estimates suggest that another 0.5–1 million cubic metres of sawn timber would have been produced. Furthermore, sawing capacity declined as a result of mill closures. Timber panel production was up by 4% on the previous year.

The gross value of production in the forest industry was approximately 18.5 billion euros in 2005. Products from the wood products industry accounted for a third of this and pulp and paper industry products accounted for the remaining two-thirds. In 2006 the gross value of production stood at around 21 billion euros, an increase of about 14% on the previous year.

With the decline in production, exports of forest industry products fell by 11% in 2005. The prices of exported goods remained more or less at the previous year's levels. With the fall in volumes, the value of forest industry exports dropped by roughly 11% and stood at some 10.5 billion euros.

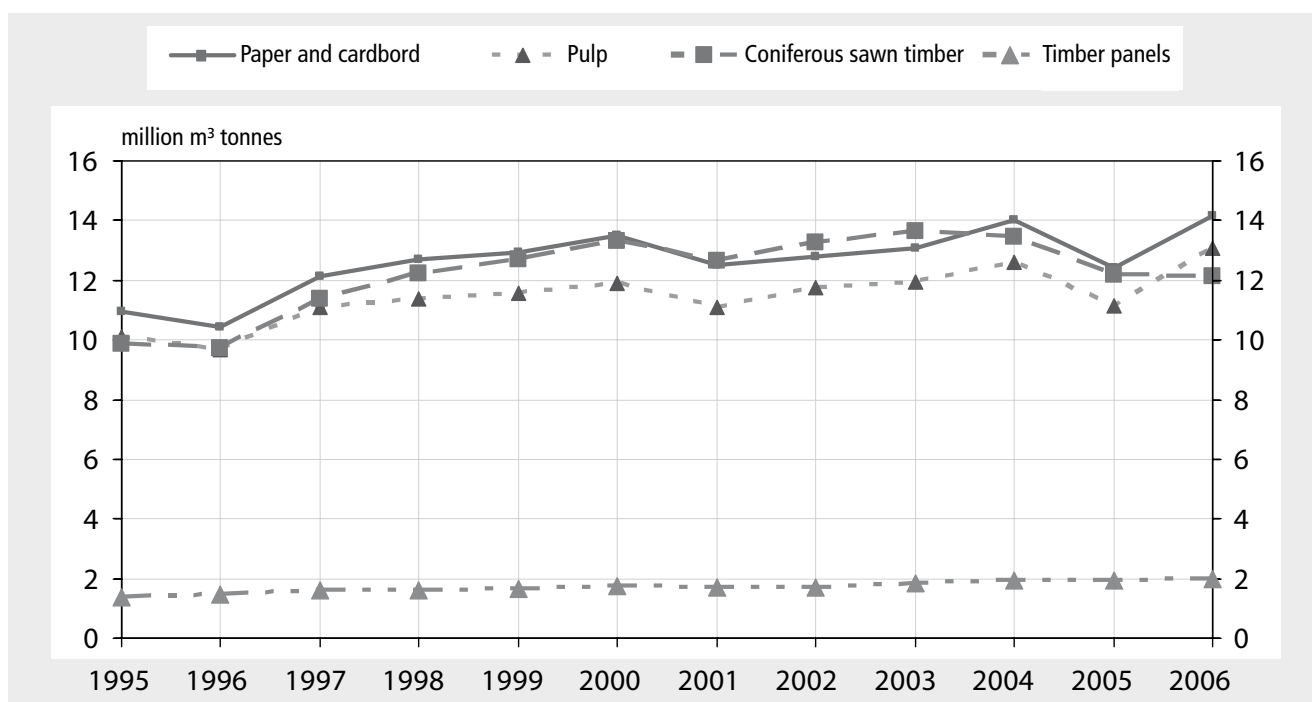


Diagram 1. Production in the forest industry in Finland 1995–2006. Member organisations of the Finnish Forest Industries Federation. Source: Finnish Forest Industries Federation.

In 2006 exports grew dramatically by around 14%. The prices of exported products rose slightly and on average by a good 2%. This healthy development pushed up revenue from exports in the forest industry to well over 12 billion euros, a 17% increase on the year before. The forest industry accounted for 20% of all exported goods (visible exports) from Finland that year.

3.1.2. Consumption of domestic wood

The forest industry in 2005 used a total of 67.8 million cubic metres of roundwood in 2005 (Diagram 2). This was down 9% on the previous year, a total of 7.1 million cubic metres. The decline applied mainly to domestic roundwood, whose consumption in 2005 stood at total of 49.9 million cubic metres. The consumption of domestic wood the previous year had stood at 57.5 million cubic metres. The main reason for the decline in the consumption of wood in the pulp and paper industry was the production stoppages due to the labour dispute in May and June of 2005. The consumption of wood in the timber industry was held down by the glut of sawn timber in European markets and the production stoppages, with demand for sawn chips falling. Furthermore, the closing down of barely lucrative sawing capacity contributed to the decline in the consumption of domestic wood.

Wood consumption in 2006 rose after the slump the previous year almost to 2004 levels. The forest industry used 73.9 million cubic metres of roundwood that year (Diagram 2). Domestic

wood consumption stood at 54.6 million cubic metres, with imported wood accounting for 19.3 million. The demand for wood was boosted in particular by the record increase in production in the pulp and paper industry. There were problems at the start of the year with the availability of domestic raw material, owing to the slow-down in the timber markets. Towards the end of the year an unusually long period of bad road conditions caused problems for the supply of timber. According to estimates, these problems with the supply of timber led to approximately 1–2 million cubic metres of domestic sawn timber trees being left unexploited.

During the first programming period (1999–2006) the consumption of domestic wood averaged 55.4 million cubic metres a year. As Diagram 2 shows, the target set for an increase of 5–10 million cubic centimetres in the consumption of domestic wood has not been achieved. The NFP 2010's objectives and targets were very much grounded in the supposition that demand for finished products would grow and production capacity would increase. Industry's need for wood has indeed grown at the predicted rate, but the demand for raw material has been considerably more in the area of imported timber than what was anticipated. The price competitiveness of imported timber, in contrast to domestic roundwood, has had an effect on the volume of imports. Another cause has been the fact that not all timber grades have been adequately available in Finland. In 2005 consumption of imported wood stood at 17.9 million cubic metres and in 2006 that figure rose to 19.3 million.

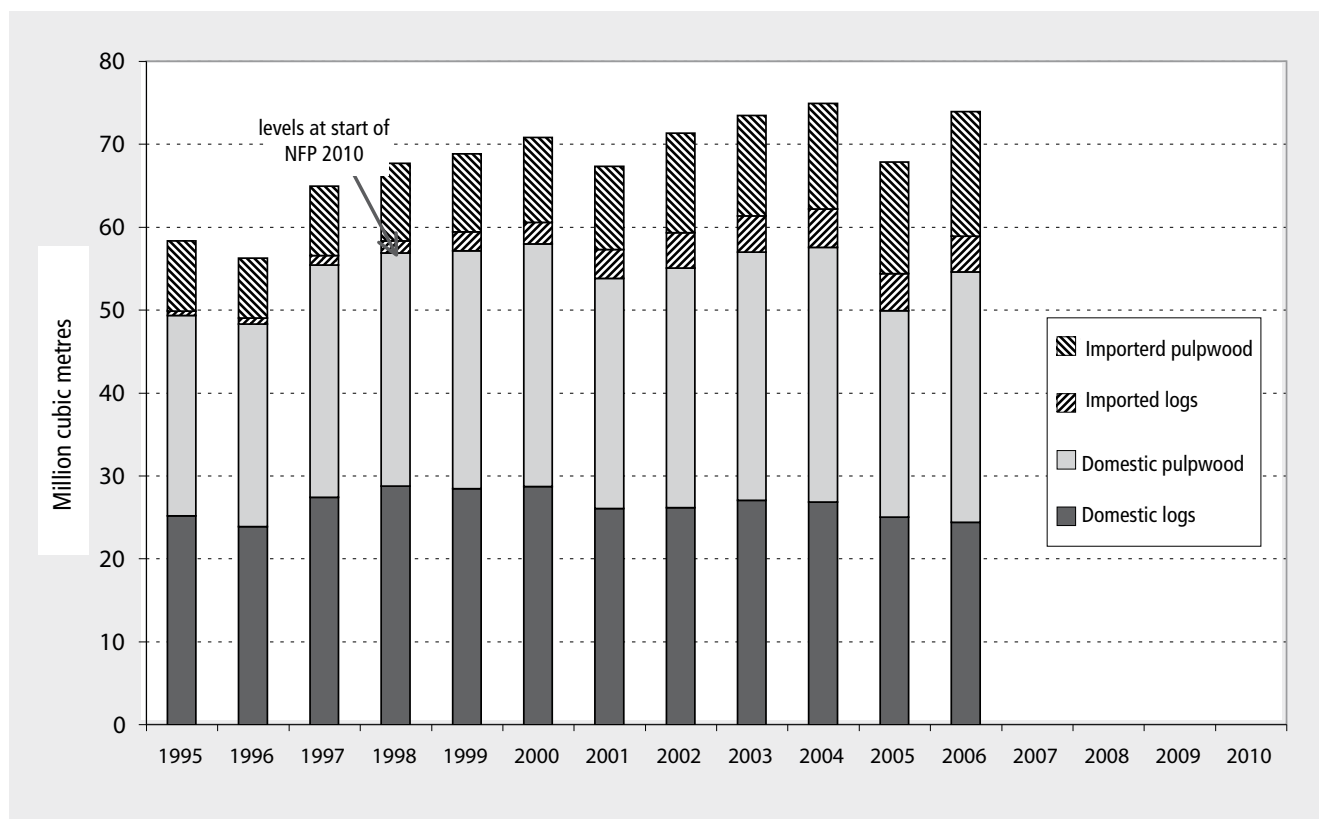


Diagram 2. Consumption of wood in industry 1995–2006. Source: Finnish Forest Industries Federation.

3.1.3. Wood products industry exports and measures to promote them

The value of wood products industry exports in 2005 stood at 2.6 billion euros, which was 4% less than in 2004. Exports of sawn goods in particular fell by 7% and prices remained low. There was a rise in prices during the second six months of the year, though the value of exports failed to reach the levels for the previous year.

In 2006 the value of wood products industry exports climbed by 11% to 2.7 billion euros. Demand for sawn goods in particular rose in the European and North American markets and unit prices rose dramatically.

It is an extremely challenging task to double the value of exports in the wood products industry, and it does not seem a realistic aim for the year 2010. However, the value of exports of refined products is likely to increase. Consumption of wood product industry products doubled in Finland during the 1990s, rising to five million cubic metres, which is to say around one cubic metre per head of population. Consumption has stayed at this level since 2000. Upgraded/refined products have accounted for a larger share of Finnish consumption than before.

On 17 March 2005 the Government issued a Resolution on the promotion of the use of wood and wood building. The Resolution covers the Industrial Policy Programme for the Wood Product Sector 2004–2010 and the programme to promote wood building 2004–2010. The purpose is to double the

value of exports in the wood products industry by the year 2010. To achieve this target, SMEs in the industry will need financial support to develop their business models, to increase exports, etc.

Development projects in the wood products industry receiving support from the state include the 'PuuSuomi –laatu' ('Wood-Finland quality') programme, the Centre of Excellence for the Wood Products Industry, the Swedish-Finnish Wood Material Science Research Programme and the EU-financed WoodWisdomNet Programme, which will produce and distribute research data to meet the needs of forestry and the forest industry.

The focus in the implementation of the Industrial Policy Programme for the Wood Product Sector is on specialisation, increasing the value added of products, improving business expertise, and the acceptability of the use of wood. The main thrust of promoting the consumption of wood products has moved from the home market to the export market. The programme for promoting wood building has continued to be implemented as a broadly based project involving collaboration between the public and private sectors. The programme's aim is to establish a sound basis for a globally competitive wood product industry to thrive and grow in Finland.

In December 2006 the Government took a decision on establishing a centre of excellence to be incorporated into the Centre of Excellence Programme for 2007–2013. Wood building is to be encouraged as part of the Housing Skills Cluster. The 'Building with wood - living with wood' theme is one of its key projects (see 3.6.1).

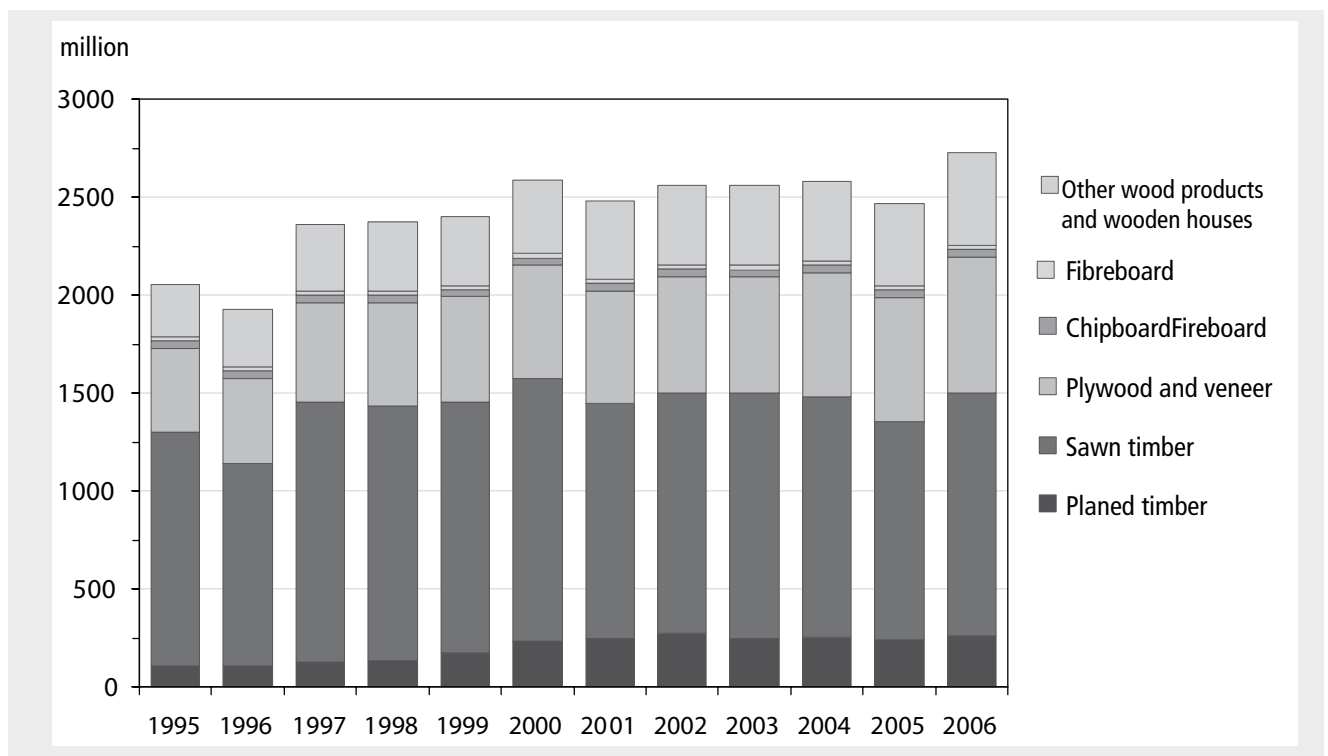


Diagram 3. Nominal value of wood products industry exports by product group 1995–2006 (forecast). Source: Finnish Customs, Finnish Forest Industries Federation.

3.1.4. Other important issues for the forestry industry

Energy

The supply of energy at a competitive price is an important strategic issue for the forest industry. It uses approximately 30% of the electricity in Finland. An adequate and reliable supply of energy will encourage investment in the country.

In recent years it is not only the availability of energy which has been high up on the agenda, but the key issues have been self-sufficiency, bioenergy, security of supply and emissions trading. The impact of climate policy has made itself felt more. In 2005 carbon emissions trading was introduced, which has resulted in huge fluctuations in the price of energy. Emissions trading has also an impact on the status of peat and its use as an energy source. Changes in the way peat is used will in turn have an effect on the use of wood as fuel (see 3.2.3 on forests as a source of energy).

Condition of transportation networks

It is important for the industry that transport policy is long-term and predictable. The forest industry needs all the transportation networks available in Finland. The condition of the lower grade road network is important for consignments of raw timber and forestry products. The condition of traffic routes declined even further in the period 2005–2006. Injections of state cash have lagged behind the needs to the tune of around 300–400 million euros.

When the conditions of the road network are poor owing to the weather, this aggravates the situation regarding the seasonal fluctuation in the supply of timber, and every year this adds around 100 million euros to costs. The stoppages in the industry in 2005 caused a slow-down in the harvesting of wood and consignments in the spring thaw. In 2006 the autumnal road conditions were unusually bad, and this led to considerable weight restrictions on gravel roads, causing problems especially for the supply of timber of sawmills. Production in the sawn timber industry was lower than average because of the shortage of raw material.

Forest certification

Forest certification is basically a market-oriented mechanism. In the case of public procurement, however, the authorities also adopt a position on forest certification. In public procurement

in the UK, wood from forests certified under the PEFC and FSC systems was found to be from legally felled and sustainably managed forests. The Dutch Kerhout system has approved the new criteria for the Finnish Forest Certification System as being consistent with the updated requirements. The Finnish Ministry of Trade and Industry has begun to draft guidelines for public procurement in Finland.

The FSC standard for Finland was adopted (accredited) provisionally on 7 June 2006. The conditions for accreditation will have been met by 7 June 2007, and the work on this is now under way.

3.2. Forestry should be profitable and provide employment

The aim of the National Forest Programme 2010 is to increase the annual logging outturn of industrial roundwood to 63–68 million cubic metres by the year 2010, whilst ensuring that silviculture and forestry adhere to high levels of environmental protection. The aim is also to increase the annual consumption of wood for energy production by five million cubic metres.

3.2.1. Profitability of forestry

In the period 1999–2004 the annual consumption of roundwood in the forest industry increased from around 69 to almost 75 million cubic metres (Table 2). Annual logging outturn, the volume of roundwood consumed from forests, at the same time kept steady at a level of approximately 60–61 million cubic metres. In 2005 the consumption of wood in the forest industry fell to below 68 million cubic metres, owing to a reduction in the use of wood resulting from strikes and lockouts in the pulp and paper industry. There was a reduction in the use of domestic pulpwood in particular. During the period 2005–2006 logging outturn stood at 59 million cubic metres. The target for logging outturn in the forest programming period was therefore not even nearly achieved.

The commercial felling of industrial roundwood used in the forest industry fell to around 53 million cubic metres in the period 2005–2006. In 2006 the commercial felling of private forests remained more or less at the 40 million cubic metres mark. The last time it had been less than this was 1996. The expiration of the forest tax system transition phase reduced the trade in wood from private forests in early 2006. In the spring trade

Table 2. Felling and wood consumption in the forest industry 1999–2006 (forecast), mill. m³. Source: Metla

	1999	2000	2001	2002	2003	2004	2005	2006 (forecast)
Logging outturn ¹⁾	60,9	61,5	59,4	60,3	61,1	61,2	58,7	59,0
Commercial felling	55,3	55,9	53,3	54,2	55,0	55,1	52,6	52,9
Imports of roundwood and waste wood	13,2	12,9	15,6	16,2	16,6	17,5	21,5	20,7
Consumption of roundwood in the forest industry	68,8	70,8	67,3	71,3	73,5	74,9	67,8	73,9

¹⁾ Logging outturn is the volume of roundwood from a forest used during the year. It comprises commercial wood felled for industry and exports, wood for contract sawing, and firewood for detached properties.

picked up once more, but towards the end of the year harvesting was hampered by heavy rain and muddy ground.

Imports of wood rose from roughly 13 million cubic metres in 1999 to 21.5 million cubic metres in 2005. In 2006 the volume of imported wood was around one million cubic metres less than the previous year. Logs and wood chips accounted for the bulk of the increase in imported wood, but in 2005 pulpwood accounted for just over half.

The annual growth in standing timber, according to the 10th national forest inventory, is 97 million cubic metres, 94 million of which is in commercial forests. There is clearly less sustainable forest logging capacity, however, owing to the main tendency for growth to be in young forests/stands. According to estimates made by the Finnish Forest Research Institute (Metla), the sustainable logging capacity for the periods 2005–2014 and 2015–2034 will be well over 66 and well over 70 million cubic metres a year, respectively. These figures are based on forest management recommendations in effect until 31 July 2006.

The price of roundwood has risen since 2005. Stumpage prices increased in 2006 in particular. Because of the reduction in private forest felling and because felling switched to forests where there was a greater predominance of pulpwood, overall stumpage earnings from sales of timber from private forests continued to fall in 2005 and 2006 (Table 3). At the same time, the real profitability of forestry (net profit) fell to 86 euros per hectare in 2006. Profits do not refer to the profitability of forestry practised by forest owners who actively exploit their forests, but private forestry is examined in this context as a whole. Forestry profitability and added value have declined throughout the programme period.

The 2005 interim report on the NFP stated that, in order to promote the profitability of forestry and reduce wood production costs, diverse silvicultural methods and greater flexibility in the choice of wood production strategies will be needed. The new recommendations for forest management drafted in 2006 under the supervision of the Forestry Development Centre Tapio were based on these goals. The review mainly focuses on providing forest owners with more options for managing their forests. The new guidelines, for example, lowered the threshold for maturity and the minimum volumes of standing timber left to grow in intermediate felling. Decree 528/2006 of the Ministry of Agriculture and Forestry prescribed new minimum volumes for wood left in intermediate felling and criteria for minimum thickness and age as a condition of regeneration felling. Tapio's rec-

ommendations for good forest management and the Ministry of Agriculture and Forestry's Decree relating to them came into effect on 1 August 2006. Improving the profitability of forestry's private economy and a more diverse use of forests were also the starting points for the Sustainable Family Forestry Programme published in May 2006 by the Finnish Central Union of Agricultural Producers and Forest Owners (MTK).

Research and development work has also been undertaken to improve the profitability of forestry. In December 2005 the Forest Research Institute ended a three-year project to test different operational models in order to boost the cost-effectiveness of forest management methods. The subjects of the tests were the reorganisation of seedling distribution and planting, the self-monitoring of forest management, quality assurance for forest regeneration, the marketing of seedling stand management (tending), spot mounding in the soil preparation of planting areas for spruce, and communication within and between organisations. Using the new operational models it was possible to cut forest service costs, improve work quality and boost the motivation of employees. Some of the tested models may be introduced as they are. (Metla work reports 23/2006).

2006 saw the conclusion of the forest regeneration quality monitoring project begun in 2002 by the Finnish Forest Management Associations, the Finnish Forestry Centres, the Forest Research Institute and the Ministry of Agriculture and Forestry. Its favourable outcome will provide a basis for further development and introduction of the system.

In 2006 the Forest Research Institute initiated a research and development programme relating to the cost-effectiveness and quality of forest management. Actors are practically involved in implementing the programmes to improve the interplay between research and practice. The means employed is case studies which serve as pilot projects and templates for wider application. Also connected with the notion of the improved profitability of forestry is the Research and Development Programme on Forest Resource Information Systems and Forest Planning embarked on in 2006 by the Forest Research Institute. Its aim is to develop process models which do not jeopardise data protection for the continued maintenance of data on forest resources, the relevant software, and planning and extension applications.

Both of the Institute's research and development programmes establish a basis for the programme activity undertaken as collaboration between organisations in the forest sector (public

Table 3. Net stumpage earnings, net profit and added value in forestry 1999–2006 (forecast) at 2006 prices (wholesale price index). Source: Metla

	1999	2000	2001	2002	2003	2004	2005	2006 (forecast)
Net stumpage earnings, €billion	1,772	1,783	1,553	1,738	1,642	1,590	1,469	1,450
Net profit from private forestry, €/per hectare	115,2	115,0	99,8	105,9	104,8	101,2	93,7	86,0
Added value in forestry (gross), €billion	2,473	2,599	2,538	2,604	2,558	2,608	2,467	2,509

sector forest conglomerate) under the Ministry of Agriculture and Forestry. These programmes are a new operating model in the performance guidance by the Ministry designed to achieve the joint objectives and targets which are the most important for the effectiveness of the sector. The Ministry's resources for joint research in 2007 will be channelled mainly into the following two programmes: Cost-efficiency and Quality in Silvicultural Operations and Production and Utilisation of Up-to-date Information on Forest Resources.

Since July 2006 the Institute has only been able to release information on stumpage prices every month for six main areas rather than for the territory of each Forestry Centre. The change is due to competition policy as well as factors relating to the data protection of individual buyers of wood. The Forest Research Institute continues to release the average prices for timber grades for the whole calendar year according to the For-

estry Centres. The change to the way wood prices are monitored may have an impact on the timber markets.

Throughout the 2000s the profitability of companies in the forest sector which manufacture machinery and transport timber has declined (Diagram 4). Rapidly increasing costs, such as the price of fuels, and the strikes and lockout in the paper and pulp mills have impaired profitability, especially in the last few years. The greater share of thinnings in the harvesting of wood contributes to the decline in profitability.

3.2.2. Workforce and training

Table 4 shows the total number of those employed in the forest sector in the period 1999–2006. The NFP predicted a fall in the forest sector workforce from 95,000 to 80,000 employees by the year 2010, but the trend proved otherwise. By 2005 employ-

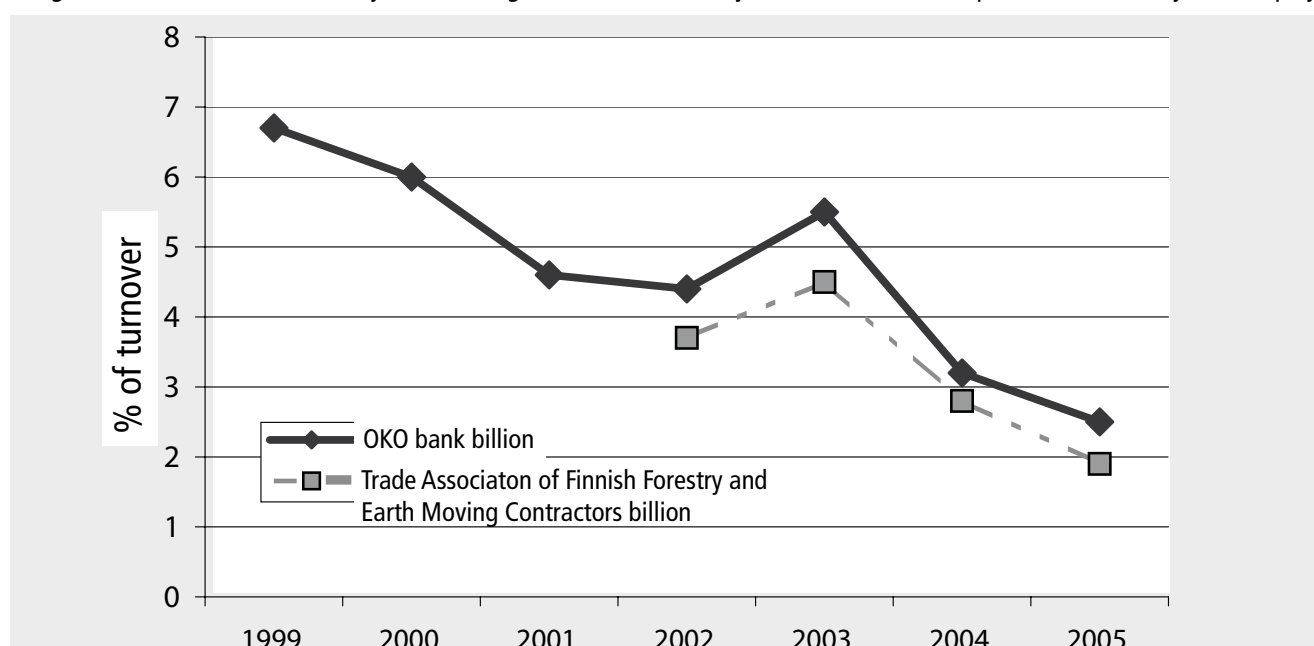


Diagram 4. Net profit for companies which manufacture machinery in the forest sector. Source: OKO Bank business statistics and the Trade Association of Finnish Forestry and Earth Moving Contractors

Table 4. Employment in forestry and the forest industry 1999–2006 (forecast), in person work years. Source: Statistics Finland and Metla

	1999	2000	2001	2002	2003	2004	2005	2006 (forecast)
Forestry¹⁾								
Workers	11 000	11 000	11 000	10 000	10 800	11 200	11 000	11 000
Clerical staff	7 000	7 000	6 000	6 000	6 300	6 900	7 000	7 000
Entrepreneurs and members of family businesses	9 000	10 000	10 000	9 000	8 600	8 600	9 000	9 000
Total for forestry	27 000	28 000	27 000	25 000	25 700	26 700	27 000	27 000
Forest industry								
Pulp and paper	40 000	38 000	37 000	39 000	36 200	34 000	35 900	36 000
Wood products	32 000	34 000	34 000	32 000	31 300	30 900	33 200	32 000
Total for forest industry	72 000	72 000	71 000	71 000	67 500	64 900	69 100	68 000
Total for forest sector	99 000	100 000	98 000	96 000	93 200	91 600	96 100	95 000

¹⁾In the groups 'employees' and 'entrepreneurs and members of family businesses' forestry also comprises persons engaged in forest improvements and timber transport.

ment still stood at 96,100 person work years and the prediction for 2006 is 95,000, the same as in 1999.

The employment figures for forestry have stayed the same during the programme period. Forestry personnel include those engaged in harvesting, silviculture, basic improvements, timber transport, and other forestry services. By the end of 2006 the pulp and paper industry will employ around 10% fewer personnel than in 1999. The number of those employed in the wood products industry has remained steady. The main reasons why employment in the forest sector has remained relatively steady overall are the increase in the amount of silvicultural and young stand improvement works and the growth in the harvesting of wood for energy.

The Forest Manpower Needs and Training Programme 2003–2010 (Savotta 2010), revised in 2004, stated that the forest industry needed 800–1,300 new employees every year for new jobs and to replace those who had left. This breaks down to around 500 employees to work forest machinery, some 300 for timber transport, around 150 forest workers (lumberjacks) and 150 clerical staff. JP Management Consulting (Europe) Oy, commissioned by the Future Forum for the Forest Sector, made an estimate of the availability of a forestry workforce for the period covering the end of 2004/beginning of 2005. According to the report, by 2020 there will be an annual labour shortage of 700–1,600 persons.

The share of forest work undertaken by forest owners themselves is expected to fall over the programme period. Approximately 5,000 person work years is the total estimated independent input for 2002. That figure is predicted to show a downward trend as forest owners get older and retire to the cities and towns.

The year-round employment of the forest workforce and machinery is a problem which calls for special measures. In silviculture ways of extending the summer planting season have been examined, and the findings look promising. Reductions in forest companies' own workforce have made it even more challenging to guarantee year-round employment. The changes will create new opportunities for various kinds of forest service companies. In order to diversify the use of machinery, special equipment has been developed and tested for forest machinery, making it suitable not only for the traditional harvesting of wood but also for forest planting, the tending of seedling stands and the harvesting of wood for energy. Research as well as improvements to machinery and equipment are still needed to encourage this development.

In spring 2006 the www.metsaopetus.fi website service was started as an interface between the supply of and demand for labour. Employers can post advertisements for vacancies in the forest sector there.

In autumn 2004 the forest colleges of Savonlinna, Saarijärvi and Muhos started a trial first degree course in bioenergy lasting three years. In 2005 there were 30 student enrolments and in 2006 45. The first 30 or so students are expected to graduate in 2007. The intention is to establish a permanent degree course as soon as possible.

There are eight colleges in Finland offering courses in forest machinery. They have also concluded study contracts with so-called satellite schools, with the result that the number of those studying the subject has grown substantially. The number of applicants for courses in forest machinery at upper level has remained satisfactory. In 2006 400 students began courses for operating forest machinery and 25 enrolled on courses for forest machinery mechanics. The problem, however, is that around 20% of those who start courses drop out. Another problem is that especially the machine operators look for employment other than they have been trained for. Pay, working conditions and job responsibility play a major role here.

To raise awareness of professional training opportunities for the forest sector, the campaign entitled 'Kurvaa metsään' ('Make a Beeline for the Forest') was extended. The campaign involves TV and radio advertising, and material production for teachers and fairs. It also included the launch of the website www.metsaopetus.fi which provides information on professions in the forest sector and advanced training courses.

There is a need for more educational facilities for entrepreneurship. Entrepreneurship is a compulsory subject in all professional first degree courses in the reform of the state curriculum. In addition, the Finnish National Board of Education has produced a course designed for producers of forest services, which is made up of a combination of former courses for forest workers and forest ecosystem workers. The course begins in autumn 2007.

The number of those starting forest sector courses at universities and polytechnics was rising up until 2004 but started to tail off in 2005 and 2006. The clear increase in unemployment, the larger number of dual qualifications, inappropriate placements in the job market, and the growing incidence of dropping out from studies are all symptomatic of the disparity between the number of qualified people and the sector's labour needs. The Finnish Ministry of Education appointed a working group on 13 November 2006 to examine the training needs of the forest cluster and make an assessment of the scope and structure of training in the forest sector (see 3.6.5).

There has been no progress in the development of the statistics system for working conditions in the forest sector commissioned by the Forest Council. No party has been found which would assume the main responsibility for the project.

3.2.3. Energy from forests

In the last few years the consumption of firewood in small properties has been around 6 million cubic metres annually across the nation. Heating plants and power stations consumed a total of 13.7 million cubic metres of solid firewood (forest chips, bark, sawdust, industrial wood residue, recycled wood, pellets, briquettes, etc.) in 2005, which was 5% less than in 2004. The greatest reductions were in the use of bark and sawdust. Industrial action in spring 2005 also contributed to the decline. In the early 2000s the use of firewood grew by an average of 4.7% a year in heating plants and power stations.

The use of forest chips for energy production has increased by an average of 26% a year since 1999, and that is almost on track for the target for growth set in the Forest Programme (Diagram 5). In 2005 heating plants, power stations and detached properties together consumed 3 million cubic metres of forest chips. The forecast for 2006 is 3.4 million cubic metres. In 2005 forest chips consisted of twig and crown mass (57%), undelimited slender tree trunks (17%), stumpage and rootstocks (14%), thick stemwood (7%) and delimited slender tree trunks (4%). The harvesting of energy wood is examined in 3.4.3.

Emissions trading and the rise in the price of emission rights have boosted the competitiveness of wood and other biomass in the energy markets, but the market still needs developing. In 2005 and 2006 the major wood suppliers in the forest industry developed energy wood as part of their supply of roundwood. There are also several players outside the traditional wood suppliers' organisations which are active in the market. New organisations and operational models are being planned and developed for the procurement and supply of wood for energy and

heat production. A market price is being established for energy from wood. In 2006 Pentti Hakkila, commissioned by the Ministry of Agriculture and Forestry, conducted an expert's appraisal of how ways of measuring energy wood could be organised and developed. So far the principles for measuring energy from forests have not been incorporated in legislation, but the aim is mentioned in the Forest Sector Future Review.

Commissioned by the Ministry of Agriculture and Forestry, Pöyry Forest Industry Consulting Oy studied the cost-effectiveness of the production, harvesting and consumption of energy from forests and the impact of aid schemes on emissions trading. According to the study, which came out in August 2006, aid under the Act on the Financing of Sustainable Forestry for the harvesting of wood for energy, forest haulage and chip production will significantly improve the profitability of the harvesting of small-scale wood. Furthermore, it will enhance energy production, forestry and forest industry activity. The benefit from aid for wood for energy will be felt equally in different sections of the production chain. Aid under the Act is not something which overlaps with emissions trading relating to single facilities/plants under the EU. The aid's impact on the total use of chips from small-scale wood, however, has been fairly minimal. The study suggested that forms of aid for wood for energy should be developed together with procedures and practices for measuring energy wood.

In November 2006 the Ministry of Agriculture and Forestry set up its own strategic working group to examine the production of bioenergy. The strategy involved applies to all parts of the bioenergy sector within the Ministry's field of operations, such as the production of bioenergy from agriculture and forests, aid and promotion measures, and the relevant effects on health and the environment.

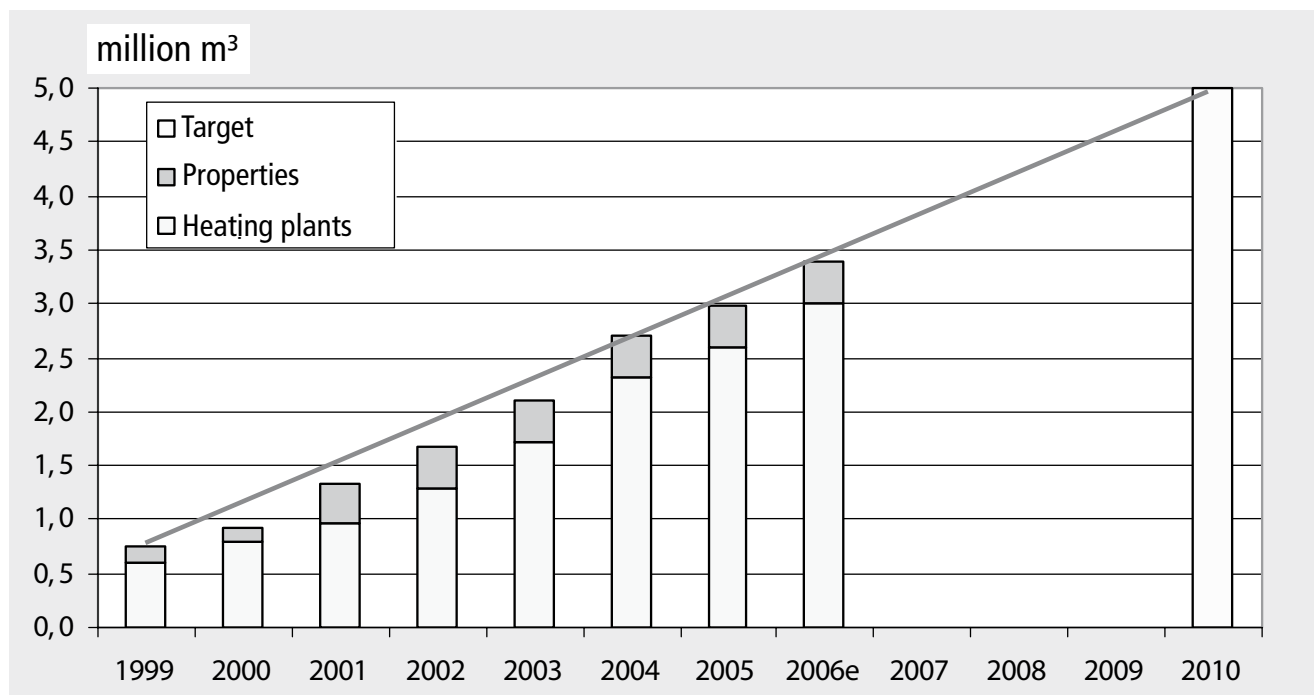


Diagram 5. Total consumption of forest chips 1999–2006 (forecast), million m³. Source: Metla

The combined use of energy from forest and peat is hampered by the way the European Union defines peat as a fossil fuel and the high carbon dioxide emission factor determined for it. Under a decision by the UN's Intergovernmental Panel on Climate Change (IPCC), emissions for the consumption of peat for energy are included fully in countries' emission loads. At the end of 2006 an extensive peat research programme was launched in Finland. The greenhouse gas balance of peat was examined on the basis of a lifecycle study. The findings show that peat's greenhouse gas effect can be reduced by focusing its production on forestry-drained peaty soil or, in particular, peaty soil which is or has been used for agriculture. In such cases the greenhouse gas effect will fall significantly over long periods of time. The greenhouse gas effect can be reduced further through the careful harvesting of residual peat, improving combustion technologies and through new methods of harvesting peat. The production of renewable bioenergy in areas free of peat production will reduce the greenhouse gas effect per volume of energy produced overall, and the greenhouse effect would be manifestly less than in burning coal.

In November 2005 the Government presented the Parliament of Finland with a report entitled 'Energy and Climate Policy in the Immediate Future – a National Strategy to implement the Kyoto Protocol'. The strategy proposes that the role which forests can play in slowing down climate change should be evaluated over a time span of several years. The aim would be to promote wood building and the use of wood products and energy from forests. The consumption of bioenergy could be increased by means of energy policy measures, mainly in the area of the use of forest chips, biomass from arable land, biogas and small-scale wood (chopped firewood, chips, pellets, etc.). The measures proposed would increase the consumption of these substantially: by 65% compared to levels in 2003 by the year 2015 and by 80% by the year 2025. There would be an especially dramatic increase in the use of wood chips from logging residue, biomass from arable land, recycled fuels and biogas.

Under the strategy, the appropriations needed to cover the costs of harvesting wood for energy and chip production are estimated at around 6 million euros a year for the Kyoto Protocol commitment period 2008–2012 (see 3.4.3. Harvesting of energy from forests). Aid schemes would be employed to try and use wood for the production of energy which cannot be used as raw material for industry or is not for market-driven energy consumption. The techno-economic potential for forest chips has been estimated at approximately 12 million cubic metres a year. There are major regional differences, however, in the potential for the consumption and harvesting of forest chips.

The developments in the forest industry have a crucial impact on the overall use of renewable energy because most of the renewable energy consumed in Finland consists of biofuels which are dependent on the production of the forest industry. The

strategy stresses that increasing the use of energy from forests should not jeopardise the availability of raw material in the forest industry.

3.3. Securing ecological sustainability

The NFP's aim is by 2010 to achieve and maintain a favourable conservation status for species and habitats in forests through a successful combination of conservation areas with diversely managed commercial forests.

3.3.1. Securing forest diversity

The objectives, targets and impact of the National Forest Programme were monitored and assessed in connection with the Finnish National Action Programme on Biological Diversity 1997–2005³. On 21 December 2006 the Government issued a Resolution on a Strategy on the Protection and Sustainable Use of Finnish Biodiversity, 'Luonnon puolesta – ihmisen hyväksi' ('For Nature – for Mankind'), for the period 2006 –2016. The strategy's objective is to halt the impoverishment of Finnish biodiversity by the year 2010, establish favourable development in the period 2010 – 2016, and be prepared for global environmental changes that threaten Finnish wildlife, especially climate change, by the year 2016.

3.3.2. Nature Conservation Programmes and the Natura 2000 network

Private land has been included in the Nature Conservation Programmes and the Natura 2000 network since 1996 by means of a financing programme, which will remain in effect until 2009. A total of 575 million euros has been set aside for the scheme. Until now around 292,000 hectares of private land has become protected this way. There are still approximately 62,000 hectares that have not as yet been included the scheme and also some areas which have been earmarked for the scheme after 2009.

A total of 20,781 areas across the country were included in the Nature Conservation Programmes and the Natura 2000 network in 2006. Protection measures mainly focused on areas under the programme to protect bodies of water where birds have their habitats, mires and coastal areas. 13,601 of lands which remained in private ownership were protected under the Finnish Nature Conservation Act and 7,180 hectares were acquired by the state under the Act. Diagram 6 shows the funds spent annually and the area of land affected.

³ Hildén, M., Auvinen, A-P. ja Primmer, E. (Ed.). 2005. Evaluation of the Finnish Biodiversity Programme. Finnish environment 770.

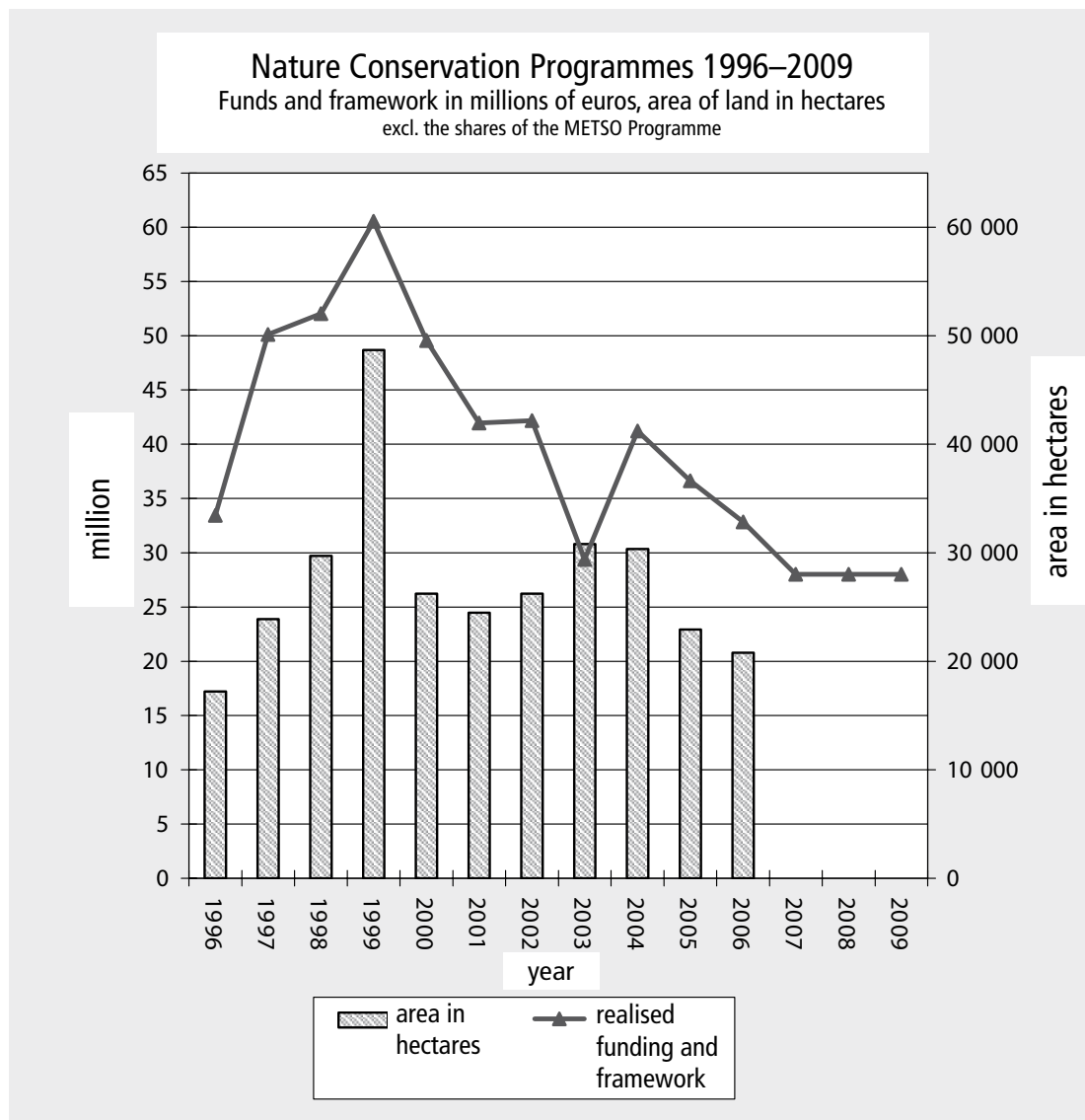


Diagram 6. Nature Conservation Programmes 1996–2009. Source: Ministry of the Environment

Table 5: Protected areas and areas where forestry is restricted 1 January 2005. Source: Metla

Protection category	Forestry land						Finnish land area			
	Forest and low-productivity forest land				Total					
	Forestry land		L-P forest land		Total					
	1 000 ha	%	1 000 ha	%	1 000 ha	%	1 000 ha	%		
Land area (National Forest Inventory 10, 2004–6)	20 164	100,0	2 769	100,0	22 933	100,0	26 280	100,0	30 414	100,0
Protected areas and areas where forestry is restricted	1 589	7,9	1 292	46,7	2 881	12,6	4 773	18,2	4 773	15,7
Protected forests	1 039	5,2	1 019	36,8	2 058	9,0	3 658	13,9	3 658	12,0
Strictly protected forests	924	4,6	961	34,7	1 885	8,2	3 412	13,0	3 412	11,2
Protected forest where cautious felling is permitted	115	0,6	58	2,1	173	0,8	246	0,9	246	0,8
Areas where forestry is restricted	550	2,7	273	9,9	823	3,6	1 115	4,2	1 115	3,7
Commercial forests	18 575	92,1	1 477	53,3	20 052	87,4	21 507	81,8	25 641	84,3

3.3.3. Statistics on forest conservation

The Forest Research Institute's Forest Statistics Information Service began compiling statistics on forest conservation in 2005. The statistics were ready in December 2005 and the data were published as part of Metla's 'Metinfo' forest information service in August 2006 (Table 5).

Statistics for the year 2007 (situation on 1 January 2007) are to be compiled from producers of data in March 2007, and these will be released in May in the form of a Forest Statistics Bulletin and as part of Metla's 'Metinfo' forest information service. In the future up-to-date statistics will be released every year according to a similar timetable.

3.3.4. METSO (Forest Biodiversity Programme for Southern Finland)

The experiment in natural values trading, which began in Satakunta and was extended to Southwest Finland in 2004, will continue to run until the end of 2007. Each year 0.4 million euros is spent on natural values trading.

The trial projects for competitive tendering under METSO ended in 2005, but the last protection agreements and deals were made in 2006. A total of 1 million euros was spent in 2004 and 2005 on the competitive tendering trial. The project of Metsähallitus concerning nature management in commercial forests was completed in 2005. It resulted in the protection of 5,000 hectares of different types of habitats.

The year 2005 was a busy one for trial projects concerning co-operation networks. Still in 2006 protection agreements were

being concluded and other protection and conservation measures were being implemented in all the trial projects. During the period 2004–2006 a total of 2 million euros was set aside for co-operation network projects.

Metsähallitus began buying land for nature conservation areas, with landowners voluntarily making areas of land available for the purpose. The project has got off to a good start. State budget appropriations for the management and maintenance of nature conservation areas were spent on inventories and the management of private nature conservation areas in the period 2004–2007. An annual sum of 0.55 million euros has been spent on this. In 2004 and 2005 most of the funds went to the gathering of data on habitats in private nature conservation areas and analyses of restoration and management needs.

The monitoring and evaluation of METSO's ecological, economic and social impacts continued. The final report on the monitoring and evaluation of the entire programme came out in November 2006. The Forest Biodiversity and Monitoring Programme MOSSE (2003 – 2006)'s 'METSO on jäljillä' ('on METSO's trail') research report was produced in autumn 2006 to aid the evaluation. According to the overall evaluation of METSO, the programme as a whole and the additional funding for the programme were mainly realised in accordance with the Resolution. METSO succeeded in its aims to create a new culture of action and widen the selection of methods needed to guarantee biodiversity. The need for a broad and target-driven programme of measures and financing to guarantee forest biodiversity is obvious.

The report states that nature sites of value for biodiversity have been successfully included in the framework of voluntary pro-

Table 6: Voluntary measures under the METSO Programme 2005–2006.

Measure under Government Resolution	METSO-project	Funding or costs, EUR	Number of agreements/ sites	hectares
4	Natural values trading	2 000 000	121	1 219
5	Competitive tendering	1 000 000	33	337
8	Network projects	2 000 000		
	Hämeen Metso (in central Uusimaa region)		37	143
	Karelian Keski-Karjala (Central Karelia herb-rich forest network)		25	27
	Lohjan seudun MetsäVasu (in western Uusimaa)		35	66
	Merestä metsäksi, ('From sea to Forest', North Ostrobothnia Forestry Centre area)		25	213
	Merestä metsäksi, ('From sea to Forest', area of the Forestry Centre of Coastal Regions)		16	100
7	Use of revenue from sales of land by Metsähallitus (2005–)	10 488 427	168	3944
10	Metsähallitus's improved regional ecology planning (nature management project of Metsähallitus)	823 000 / year		4 952

tection on private land in the trial projects. These have concerned natural values trading, competitive tendering and co-operation networks. The restoration of conservation areas has improved the conditions for the development of biodiversity in the present conservation areas and the gathering of basic data on the nature conservation areas has made people more aware of the natural value and importance of the conservation area network. The programme has resulted in a sound basis for improving the network's viability, representativeness and effectiveness and for increasing biodiversity in commercial forests. The programme's evaluation has also produced a good number of opinions on the improvements needed to the forest biodiversity knowledge base.

The Forest Council's working group on ecological sustainability monitors the progress of the evaluation. A decision on further measures and resources relating to securing forest biodiversity will be taken by the Government at the same time as the decision to review the National Forest Programme towards the end of 2007. The Forest Sector Future Review, out in September 2006, lays down future policy for the forthcoming Forest Biodiversity Action Programme (2008 – 2016), which is aimed at fundamentally improving biodiversity status and which applies a great variety of means of securing biodiversity.

Annex 2 describes the implementation of the METSO programme 2005–2006 in more detail.

3.3.5. Habitats of special importance under the Finnish Forest Act, environmental aid and agreements

By the end of 2005 a total of 75,746 hectares of habitats of special importance had been identified in private forests. By the end of 2006 this figure had gone up to 79,413 (Table 7). Most of these were mapped in the METE survey, although the precise number of habitats will become more evident in conjunction with forest planning.

The use of environmental aid in forestry grew during the five-year period. In 2006 the area covered by the environmental agreements made by virtue of the Act on the Financing of Sustainable Forestry (1094/2006) was 18,634 hectares and the environmental aid paid rose to more than 4 million euros (Table 8).

Environmental aid is paid to compensate forest owners for maintaining the biological diversity of forests or environments of special importance, or for additional costs or losses resulting from other kinds of nature management. The Forest Act carries an obligation to safeguard habitats of special importance, and the Act's general aims include maintaining the biodiversity of forests.

3.3.6. Conservation process of old-growth forests in northern Finland

During the dialogue process there was more specific regional ecological planning by Metsähallitus for the period 1996–2000. As from 2004 the process also took account of the meetings of stakeholders in the Finnish regions.

Table 7. Area of habitats of special importance under the Forest Act identified in private forests. Numbers given for each Forestry Centre. Source: Forestry Development Centre Tapio's annual statistics 2001–2006.

	2001	2002	2003	2004	2005	2006
Coast	764	1043	1645	1740	1862	1915
Southwestern Finland	2024	2539	2855	2930	3146	3140
Häme-Uusimaa	1496	1862	2288	2357	2426	2463
Southeastern Finland	1837	2197	2360	2261	2505	2551
Pirkanmaa	2543	3310	3967	4046	4111	4268
South Savo	4435	5618	7066	7111	6967	7346
South Ostrobothnia	2091	2182	2971	2982	2982	3299
Central Finland	1711	2321	2848	3059	3389	3619
North Savo	3047	3686	4148	4507	4781	4932
North Karelia	4082	4922	6498	6659	6864	6896
Kainuu	1898	2324	2759	2905	3187	3311
North Ostrobothnia	8343	11406	15012	22504	26948	28664
Lapland	3902	4818	5626	6525	6578	7009
TOTAL	38173	48228	60043	69583	75746	79413

Table 8. Amount of aid, number of agreements and area covered 2001–2006. Source: Tapio's annual statistics 2001–2005

	2001	2002	2003	2004	2005	2006*
Number of agreements in effect	427	722	885	1174	1915	
Total area in hectares of sites which received environmental aid	2733	5383	6978	9128	12742	18634
Aid paid annually (1,000)	1537	1735	1374	2380	3184	4102

*More precise data for 2006 will be available in the spring when the Forest Programme monitoring data is gathered.

During the process the WWF, the Finnish Association for Nature Conservation and Metsähallitus met a total of 74 times and five meetings of stakeholders were organised in different parts of northern Finland. The protection values of over 400 potentially valuable areas of old-growth forest were considered, as well as their protection needs and the opportunities there were for conservation. The combined land area of the sites amounted to around 360,000 hectares, of which productive forest land accounted for approximately half. The sites were located around northern Finland, from Kainuu up to the southern borders of the municipalities of Enontekiö and Inari. The area examined did not extend to the municipality of Inari in Ylä-Lappi (Upper Lapland), as there was already a high degree of protection here and, in any case, a separate process for coordinating forestry with reindeer husbandry was under way at the same time in the area.

As a result of the dialogue process, on 13 June 2005 Metsähallitus decided to protect some 100,000 hectares of forest and mires (55,000 hectares of productive forest land). The decision included sites for whose boundaries a common view was provisionally established in the dialogue process.

In autumn 2005 Metsähallitus offered WWF and the Finnish Association for Nature Conservation an opportunity to participate in locating and demarcating the sites on maps. The WWF responded positively to the offer. The WWF and Metsähallitus agreed in collaboration with the Ministry of Agriculture and Forestry that the choice and location of the sites should aim for a result which was as biologically satisfactory as possible in terms of nature conservation. The Finnish Association for Nature Conservation did not take part in the project, as it considered that too many virgin (primeval) forests were being excluded.

Metsähallitus reached an agreement with WWF Finland regarding the original area under the programme to protect old-growth forests in northern Finland, which stretched from the Oulu River – south Kuhmo border north to the southern border of Enontekiö and the northern parts of Kittilä, Sodankylä, Savukoski and Salla.

In addition to the area mapped out above, they also examined the situation regarding conservation in a section of Metsä-Lappi ('Forest Lapland') in the northern boreal vegetation zone. The Metsähallitus decision led to an increase in the number of protected areas in Forest Lapland, too. The region still has natural forest within the commercial forest area. The reconciliation of use of natural resources (forestry, reindeer husbandry, tourism, etc.) takes place in the regional natural resources and action planning by means of a participatory planning process.

In December 2006 Metsähallitus published a report on the status of the protection in the Forest Lapland region.

3.3.7. Protection of waters and forestry

The Finnish Government submitted a legislative proposal to the Parliament of Finland on the reform of the Act on the Financing of Sustainable Forestry in 2006 (HE 177/2006). The Government's proposal for financing forestry also contains a provision on the management of mire forests. It is proposed that in the context of management projects concerning mire forests aid be granted, among other things, for the necessary water protection measures. Water protection measures are particularly designed to prevent harm and damage from movements of solid matter. The Government decision relating to the proposal is intended to ensure that the reasonable costs of implementing water protection measures as part of a mire forest management project can be recovered from the state entirely in the form of aid. Furthermore, funding for future forest nature management projects may be allocated in order to prevent damages to bodies of water.

To prepare their report for 2006 the Finnish state auditors requested an account of how appropriate and fruitful the protection of waters had been. An investigation was conducted into the annual amounts spent on water protection measures in each Forestry Centre. Around 2.943 million euros is spent a year overall, of which the state's contribution is 2.136 million euros, that of landowners is 0.757 million euros, and 40,000 euros come from other sources.

The Government issued a Resolution on 23 November 2006 on guidelines for water protection up until the year 2015. The guidelines are used to determine national targets for water protection by 2015 in respect of inland waters, Finnish coastal waters and groundwaters. The importance of good advance planning of measures is highlighted for forestry, including adequate protection and drainage zones for all bodies of water, to prevent erosion in particular. The protection of small water systems needs to be stepped up. Agriculture needs to be planned better to prevent deterioration in the condition of water wildlife.

3.3.8. Carbon sink effect in forests and climate issues

In December 2006 the Finnish Government confirmed the policy that Finland would apply forest management measures in the first commitment period 2008–2012 under the Kyoto Protocol. Increasing carbon binding of forests may help ease Finland's obligations regarding emissions by up to around 0.6 million tonnes of CO₂ a year. The new policy is based on updated estimates made by the Forest Research Institute and MTT Agrifood Research Finland of emissions eliminated by forests and of greenhouse gas balances from Finnish forests and land use. Under the policy, owing to climate policy, there will be no restrictions on sustainable forestry, wood sales or the supply of wood and other biomass. In the future measures will be investigated and drawn up to ensure the long-term carbon sink potential in Finnish forests. Resources

will also be set aside to assess the situation regarding greenhouse gases in forests and designing policy on future sink effect.

At the start of 2005 the National Strategy for Adaptation to Climate Change was published. It forms part of the national strategy on energy and climate. The Strategy gives an appraisal of the country's current ability to adapt to climate change and it outlines measures to improve adaptability. The proposed measures include an assessment of the impact of climate change and specific adaptation measures, which are integrated with normal everyday planning, implementation and monitoring in various fields and sectors. 2006 saw the launch of the Climate Change Adaptation Research Programme for the period 2006–2010.

The report which the Finnish Government presented to the Parliament of Finland entitled 'Energy and Climate Policy in the Immediate Future – a National Strategy to implement the Kyoto Protocol' is examined with regard to energy issues in 3.2.3. Important for climate change is the impact of the use of wood for energy on greenhouse gas emissions. For example, if the use of forest chips were increased by 1 million cubic metres to take the place of oil, CO₂ emissions would fall by 0.5 million tonnes per annum.

3.4. Forests should be well managed

The aim of the National Forest Programme 2010 is to attend to matters of silviculture (forest management) and forest improvement in such a way that a logging outturn rate for roundwood amounting to 63–68 million cubic metres annually is sustainable. This will mean increasing overall investment in wood production to its former level of approximately 250 million euros a year.

3.4.1. Situation with regard to silviculture, basic improvements and financing

According to the interim evaluation of the National Forest Programme in spring 2005, the increase in silvicultural work and basic improvements has gone quite well. State aid has mainly come at the levels proposed in the programme and the forest owners' own contributions to funding have risen correspondingly. More work has been done in the areas of young stand improvement, basic improvements to forest roads and the fertilisation of forests. On the other hand, the targets are behind in first thinnings and ditch cleaning and supplementary ditching.

In the period 2001–2004 an average of 232,000 hectares a year were used for young stand improvement and the tending of seedling stands. The corresponding figures for 2005 and 2006 were 218,000 and 210,000 hectares respectively (Diagram 7). Actual tending of seedling stands has covered around 140,000 hectares a year during the 2000s. Targets for seedling stands for 2006–2010 under the Regional Forest Programmes reviewed in 2005 are 203,000 hectares annually, i.e. an increase, hopefully, of 45%. The results of the 10th national inventory of forests completed in 2006 (VMI 10) suggest that the need for the silvicultural management of seedling stands is as much as a third greater than the target set.

Approximately 120,000 hectares of forest cultivation has been undertaken each year, though the target set in the Regional Forest Programme is 155,000 hectares for the period 2006–2010 (Diagram 8). About a quarter of forest cultivation has been sowing and the rest planting. Now some 60,000 hectares of pine and spruce are cultivated each year. The birch growing area has shrunk to just a few thousand hectares a year, mainly because of the increase in the damages caused by deer.

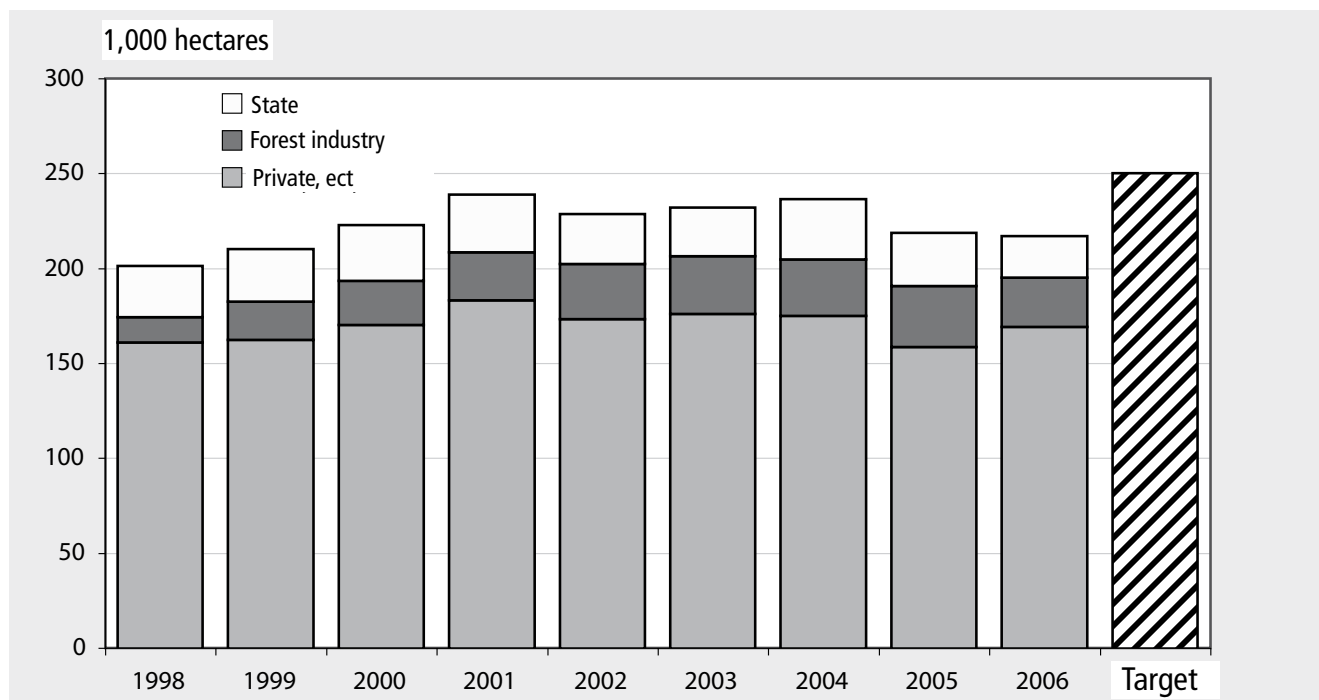


Diagram 7. Area where tending of seedling stands carried out by forest owner group 1998–2006 (forecast). Source: Metla

First thinnings have been undertaken annually on about 170,000 hectares. The yearly target of the Regional Forest Programme is 240,000 hectares for the period 2006–2010 (Diagram 9). All forest owner groups are lagging behind the targets for first thinnings. This is due to the fact that in the 1980s and 1990s there were not enough seedling stands. If there is no tending of seedling stands, more often than not a pole-stage/stick stand develops and first thinning is not economically viable. In order to manage pole-stage/stick sites, aid for young stand improvement has been applied over the last 10 years. The fall in the real price of pulpwood in practice throughout the 1990s aggravated the situation. It is at its most serious in areas where ditches have been dug for drainage.

In the first two years of this century, ditch cleaning and supplementary ditching was carried out over 80,000 hectares of land per annum, but that went down to around 70,00 hectares in the years following (Diagram 10). It is difficult to give any one single reason for the decline: in general the amount of ditch cleaning and supplementary ditching is more or less in line with the volumes logged. The target under the Regional Forest Programmes for the period 2006–2010 is 100,000 hectares.

New forest road construction has decreased to less than 800 kilometres a year and basic improvements to forest roads have risen to over 2,000 kilometres a year (Diagram 11). The target under the Regional Forest Programmes for 2006–2010 is to

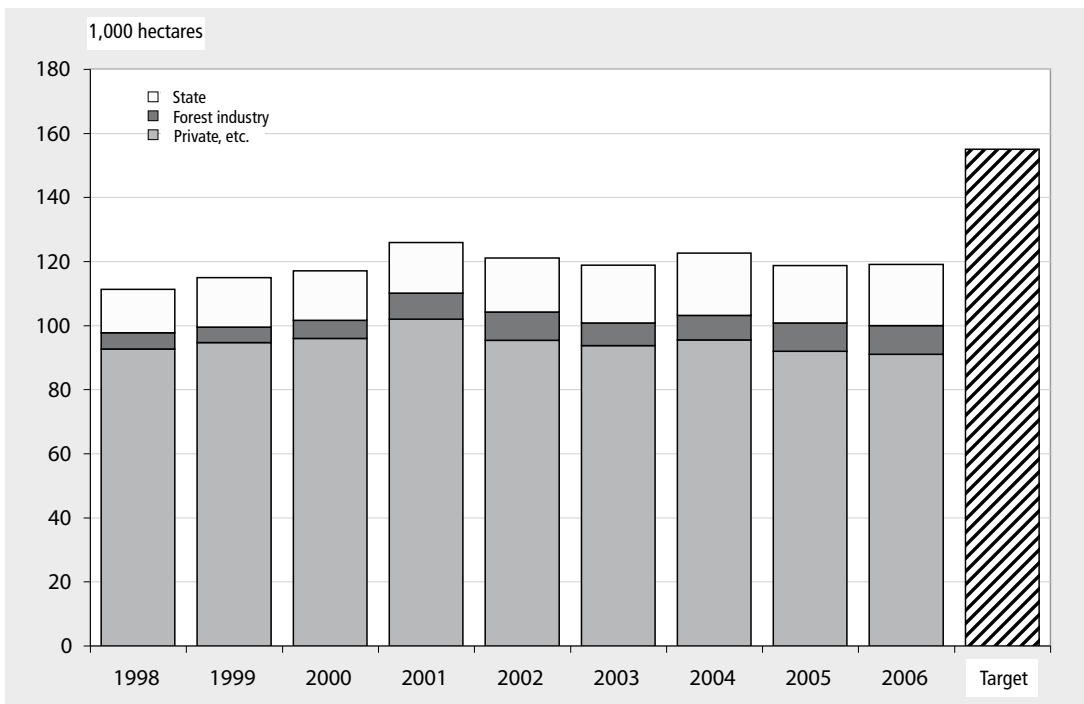


Diagram 8. Areas where forest cultivation carried out by forest owner group 1998–2006e (forecast). Source: Metla

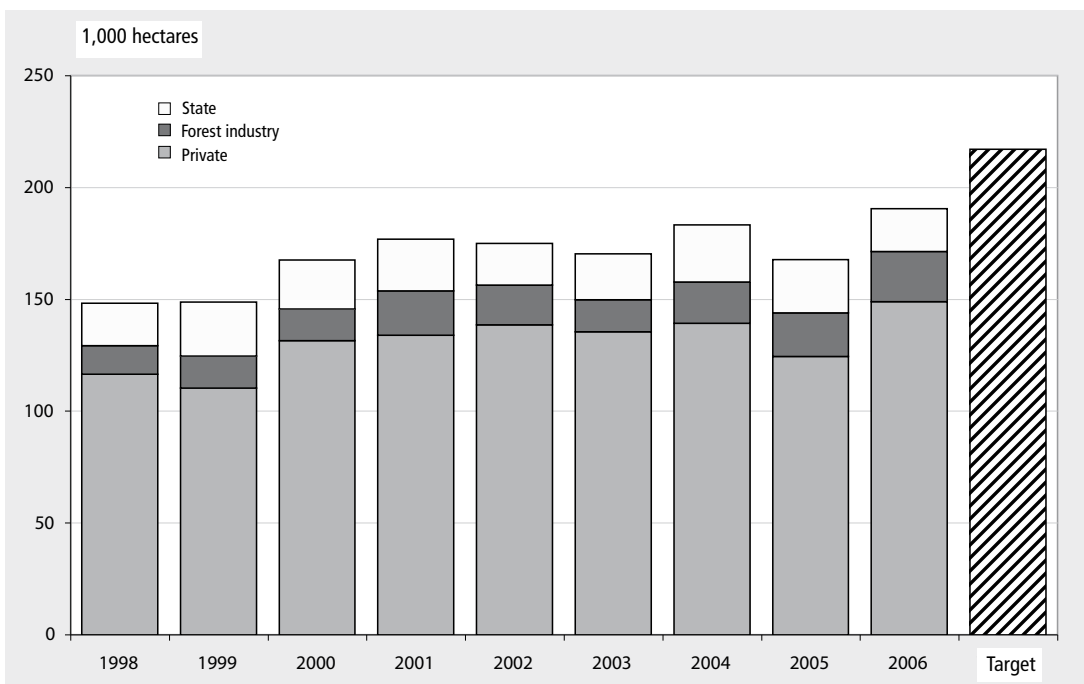


Diagram 9. Areas where first thinnings carried out by forest owner group 1998–2006 (forecast). Source: Metla

build approximately 600 kilometres and make basic improvements to some 2,400 kilometres of forest roads yearly. The condition of the rest of the rural road network has become something of a barrier to forestry transportation.

In 2005 aid totalling 62.3 million euros was spent on work to secure the sustainability of wood production under the Act on the Financing of Sustainable Forestry. In 2004 this sum had been 64.7 million euros and in 2003 69.2 million euros. In 2006 61.2 million euros was used for the aid. In 2005 4.26 million euros of this appropriation was spent on the harvesting of wood for energy and 0.87 million euros on wood chips production. In 2006 the respective sums were 4.43 million and 1.8 million euros. In 2005 another 5.55 million euros was spent on the man-

agement of forest nature/wildlife. In 2006 this figure rose to 6.58 million euros.

The real value of the funds to promote wood production has fallen every year. It fell in 2004 by about 8%, in 2005 by about 4% and in 2006 by about 2%. Appropriations to promote forest nature management have increased accordingly. Appropriations as a joint sum fell in real terms in 2004 and 2005, while in 2006 the real value of appropriations for safeguarding wood production and nature management remained the same.

The report entitled 'The Customer-producer Model in the Finnish Forestry Centres' by the working group set up by the Ministry of Agriculture and Forestry came out in January 2006 (work-

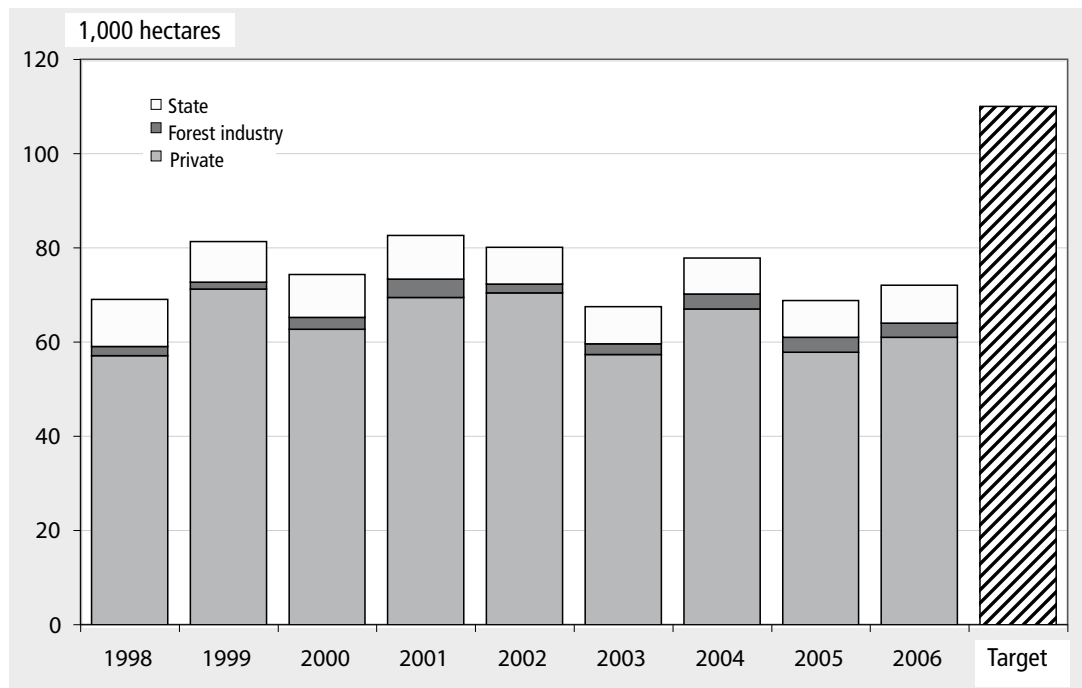


Diagram 10. Areas where ditch cleaning and supplementary ditching carried out by forest owner group 1998–2006 (forecast). Source: Metla

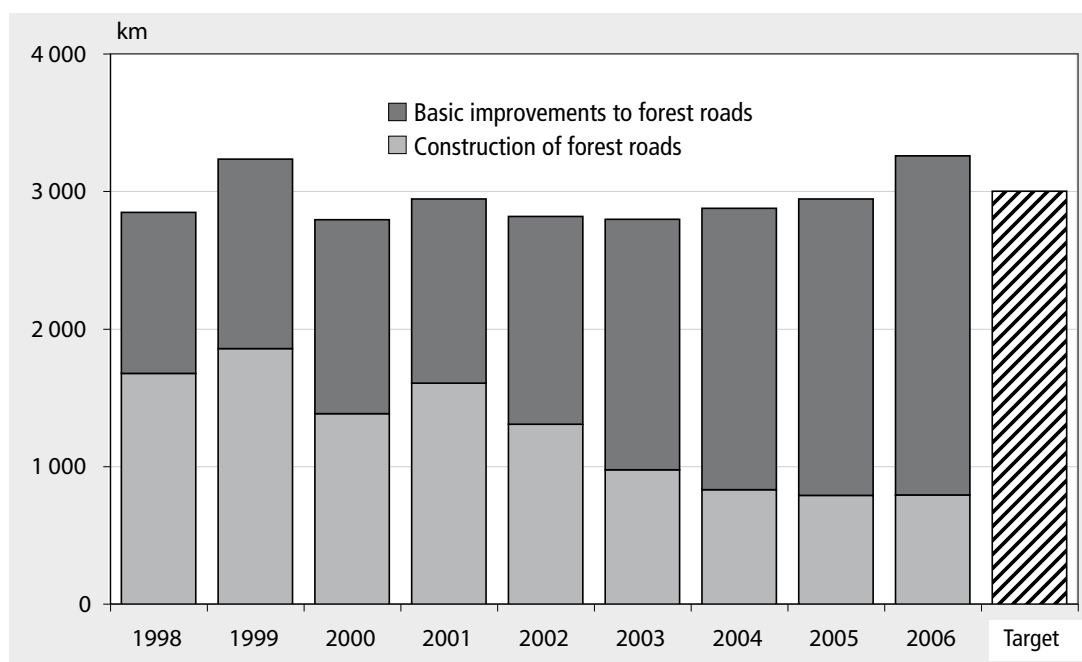


Diagram 11. Forest road construction and basic improvements 1998–2006 (forecast), all forest owners together. Source: Metla

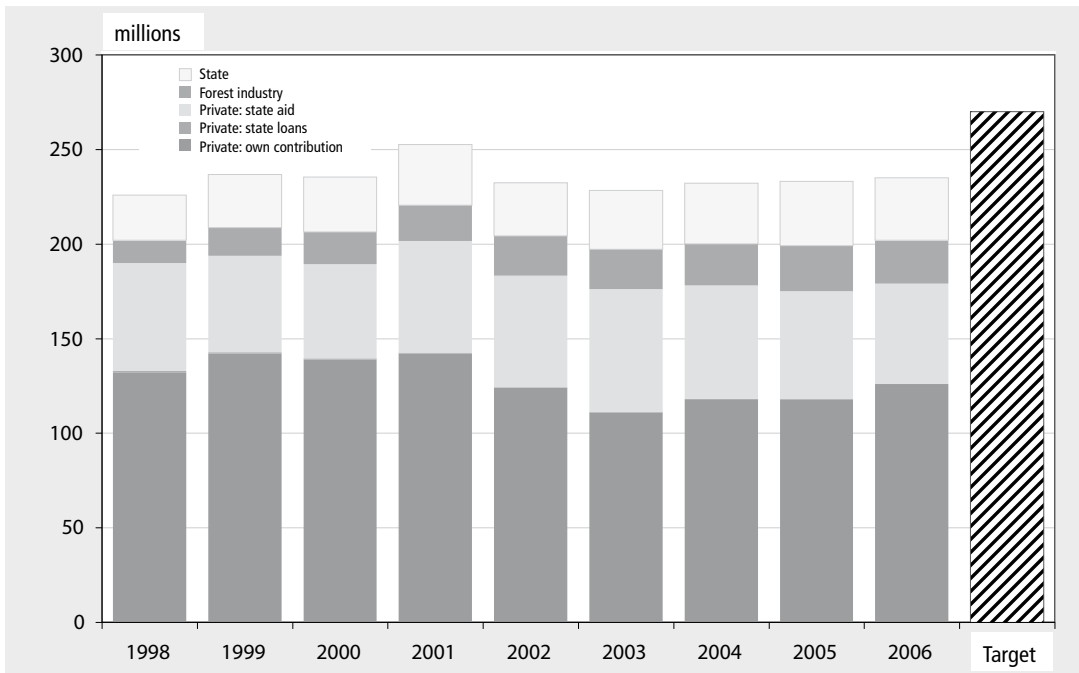


Diagram 12. Real overall costs of silvicultural work and basic improvements by owner group 1998–2006 (forecast) at 2006 prices (wholesale price index). Source: Metla

ing group memo Min. Ag. For. 2006:5). One of the working group's tasks was to examine how work under the Act on the Financing of Sustainable Forestry was planned and executed. The group proposed analysing the findings from trial projects by Forestry Centres and the outsourcing of forest improvement business operations by the Central Finland Forestry Centre in order to develop operations based on the customer-producer model. In their talks on the results held in 2007 the Ministry of Agriculture and Forestry and the Forestry Centres agreed the details relating to the monitoring and evaluation.

The emphasis on young stand improvement under the Act on the Financing of Sustainable Forestry passed by Parliament at the beginning of 2007 switched to forests in the seedling stand phase. The work in this phase is less costly and has a greater impact silviculturally than work done in young growth forests. The amount of aid is the same for both seedling stands and young growth forests. The lower limit for eligible sites is being lowered and the seedling stand's average height after the work is to be two metres. In the new Act on financing, ditch cleaning and supplementary ditching is replaced with a new type of mire forest management. Mire forest management covers ditch clearing, digging more ditches, water protection measures and building roads with verges. Taking account of forest mire management projects, the aid paid for young stand improvement and remedial fertilisation is higher than otherwise.

The Forestry Development Centre Tapio published its amended recommendations for forest management in June 2006. They highlight the importance of the early tending of seedling stands and change, among other things, the recommended length of time for managing seedling stands of spruce to more or less what it was before (for an examination of felling see 3.2.1).

3.4.2. Quality of forest management (silviculture)

According to the 10th state inventory of forests (VMI 10, 2004 – 2006), 78% of the regeneration felling in the 10-year period preceding the inventory was aimed at artificial regeneration and 22% at natural regeneration. The proportion of felling aimed at artificial regeneration in the 10-year period before VMI 9 (1996 – 2003) was manifestly less, at 69%. The ratio of artificial to natural regeneration in the 10 years prior to VMI 8 (1986 – 1994) was virtually the same as now. Cultivation generally results in good-quality seedling stands more quickly and reliably than natural regeneration, so increasing the share of cultivation in the most recent years should lead to a better regeneration outcome if the tending of seedling stands is carried out at the right time. The share of underproductive forests has fallen from 13% (VMI 7) to 10% (VMI 10).

The quality assessment of stands in the 10th national forest inventory was based on the volume and quality of the output of wood in seedling stands, growing forests and mature forests. The criteria in the regeneration areas were the timing of the regeneration work and work quality. The quality was good in the case of 47% of the regeneration areas: in 40% of the young seedling stands, 21% of the mature seedling stands, and 17% of the young growth forests. The main reasons for the decline in quality are the unevenness of standing timber and destruction. The findings in practice reconfirm the need which has been highlighted to improve the quality of silvicultural work.

The Forest Research Institute, Forestry Centres and Forest Management Associations collaborated on the Forest Regeneration Quality Management project. Its final seminar was held in November 2006. The project developed a practical operational model for the systematic management and monitoring of the

quality of forest regeneration. The results suggest that quality could be improved considerably. Various organisations in private forestry are embarking on a project in which the quality of forest regeneration will be integrated with the Forest Management Associations' quality and environment system.

A guarantee for the result of forest regeneration is to be introduced gradually as a part of the forest regeneration service. The Ministry of Agriculture and Forestry is to put out to tender a programme entitled 'Cost-effectiveness and Quality in Forest Management', which will focus largely on the quality of forest regeneration. The relevant research and development programme is already under way at the Forest Research Institute (see 3.2.1).

A key objective for impact in the Forestry Centre and Forestry Development Centre Tapio's performance agreements is the good productive status of forests in terms of wood. The target share for well-established seedling stands under the recommendation for good forest management is 85%. The monitoring and inspection work by the Forestry Centres focuses special attention on the supervision of areas of forest regeneration.

3.4.3. The harvesting of energy from forests

In the new Act on the Financing of Sustainable Forestry, the harvesting of wood for energy and chipping have their own separate Chapter (Chapter 3). In the future aid for harvesting energy wood will no longer be tied to young stand improvement subsidised by the state. Aid may be obtained for the piling and hauling of wood felled when seedling stands and young growth forest are supplied for energy use. Aid for the chipping of wood for energy may be obtained for the chipping of wood for which energy wood harvesting aid has been granted.

Most energy wood is harvested in regeneration felling areas, without state aid. There has also been a dramatic increase in the number of stumps which have been dug up and removed. The economic feasibility of harvesting is determined by the market conditions. The economics of harvesting energy wood in regeneration felling areas depends very much on the energy policy practised, e.g. emissions trading. Forest energy issues are dealt with in more detail in 3.2.3.

More research data is needed on the effects of the increase in the use of forest energy on forest development, the nutrient balance of forests and their biodiversity. The Forest Research Institute began a research programme on the subject in 2006. The Good Forest Management Recommendations drafted in 2006 by the Forestry Development Centre Tapio include consideration of the harvesting of energy wood. Tapio also published a guide to the harvesting of wood for energy in 2006.

The results of studies obtained recently as well as practical experience do not support the earlier objective of combining the harvesting of industrial roundwood with that of wood for energy. If a stand contains energy wood and just a little industrial roundwood (less than 30 cubic metres per hectare) it should all be harvested as energy wood. If there is more industrial roundwood than this, it is a good idea to delay thinning of the standing timber, after which the industrial roundwood which meets industry's requirements for size and quality and the wood earmarked for energy use are harvested separately.

The Forest Research Institute has initiated a research project into the reconditioning of drained areas, in which the use of energy wood harvestable in these areas forms a fundamental part. In the legislative proposal for the new Act on financing a new type of work specified is bog forest management, where the aim is to recondition a whole forest bog site in one go.

3.4.4. Trends in damage caused by deer

Approximately 60,700 moose hunting licenses were issued for 2005 and around 66,000 for 2006. One license allows the hunter to kill one adult moose or two calves. In 2005 some 74,000 moose were killed and in 2006 well over 75,000. The idea is to try and reduce the moose population, especially in the north of the country, so half the moose hunting licenses are issued for the three northernmost game management districts. The greatest winter population of moose so far is thought to have been in 2001, when it was 136,000, an average of 3.3 moose per 1,000 hectares. The winter population in 2005 was estimated at 99,000. Moose populations have gradually become the greatest in the north of the country, as opposed to the south, as used to be the case. The Province of Oulu has a particularly abundant population.

In 2005 about 5 million euros was paid out in compensation for damage caused by moose. In 2006 this was around 3 million euros. The compensation paid only covers some of the damage caused by moose to private forests.

In 2005 the issue of hunting licences for roedeer was abandoned and at the same time damage caused by roedeer was excluded from the compensation scheme for damage by deer. The scheme is to be reviewed with the enactment of a new Game Damage Act on the basis of a proposal by the Ministry of Agriculture and Forestry's working group specialising in moose damage. The current excess of 250 euros under the scheme is to be changed to a threshold value beyond which there is full compensation for damage.

The Finnish Forest Research Institute and the Forestry Development Centre Tapio have launched a project to research into and report on forest management and damage caused by moose.

3.5. Forests for recreation and natural products

The aim of the National Forest Programme 2010 is to take account of traditional ways of exploiting forests in conjunction with their use and conservation, and promotes wide-ranging material and spiritual well-being derived from them. The production and marketing of nature tourism should be developed.

3.5.1. Priorities in the promotion of recreational use and natural products

The NFP's follow-up report which came out in 2004 stated that the further measures proposed in the follow-up reports for 2002 and 2003 had barely made any progress, except for information about services relating to recreational use and nature tourism. Further progress would require more co-operation among the various agencies and new partners, such as the National Nature Product Theme Group.

The NFP's interim evaluation in spring 2005 stated that the set of aims and targets under the objective 'Forests for recreation and natural products' should be brought into sharper focus and examined from the point of view of the growth in nature tourism and its importance for the local economy. Existing resources should be allocated from the point of view of demand for the recreational use of nature and additional resources allocated on the basis of impact on the local economy.

Appropriations for recreational and hiking areas and an improved knowledge base require additional investment. Guidance sessions for forest owners and training courses for advisers should focus attention on alternative uses for different forests. The content and quantitative standards of training courses on nature tourism should be appraised and study programmes developed. The monitoring of the NFP should be stepped up with more detailed and specific reporting. There should be more effective gathering of data on measures implemented by administrative departments outside the Ministry of Agriculture and Forestry and data gathering should be standardised. The need for research into nature tourism should be assessed.

3.5.2. Development and coordination of the recreational use of forests

The Finnish Outdoor Recreation Act has never been revised. In 2004 the Outdoor Forum of Finland was set up to ensure that the public right of access ("everyman's right") is not watered down and that cross-country sports events (e.g. orienteering, rambling and cross-country competitions) can continue to take place in the future. Suomen Latu, a Finnish outdoor organisation, heads the forum. The objectives relate to themes such as the preservation of the public right of access, the planning of areas for outdoor recreation, sport and exercise, the general use of beaches and lakeside areas, the use of bodies of water and ice, subsidies for outdoor recreation, the upkeep of paths and trails and signposting, and the funding and management of outdoor activities.

During 2006 Suomen Latu made a survey of all the legal cases in Finland that related to the public right of access. There were 21. The legal decisions taken lend more support to the notion of preserving the right of access as it now stands but stressing the importance of the responsible use of the rights. The survey was conducted as part of a project entitled 'The Public Right of Access and Responsibilities. The national treasure: problems, the need for guidance and ways to guarantee its existence'. A closer analysis of the court cases will be completed in the spring of 2007 and they will form part of a Professional Handbook on the Public Right of Access. This is a collaboration involving the Outdoor Forum and the results will be published by the Ministry of the Environment by the end of the year.

Metsähallitus has set up the Luontoon.fi website, which has information on hiking sites throughout the country. Metsähallitus also systematically monitors the number of visitors to the sites (Table 9) and carries out or commissions visitor studies in order to develop local services and make the management of the areas more customer-oriented.

In February 2003 the Government issued a Resolution on an action plan to develop the recreational use of the countryside and nature tourism (VILMAT). In 2004 Metsähallitus drafted the first

Table 9. Numbers of visitors to national parks, hiking areas, wildlife centres and other customer service points run by Metsähallitus 2001–2006. Source: Metsähallitus

Number of visits to national parks run by Metsähallitus	2001	2002	2003	2004	2005
National parks: total	30	32	34	34	34
Number of visits: total	851800	1012000	1123200	1153900	1410000
Number of visits: average	28393	31625	33035	33938	41471
Change %	2,2	15,8	9,9	2,7	18,2

Number of visits to Metsähallitus customer service points	2001	2002	2003	2004	2005	2006
Customer service points: total	21	22	23	26	26	26
Number of visits: total	563800	671600	687700	769600	787400	775400
Number of visits: average	28848	30527	29900	29600	30285	29823
Change %	15	19	2	12	2	-2

Number of visits to state hiking areas	2001	2002	2003	2004	2005	2006
Hiking areas: total	7	7	7	7	7	7
Number of visits: total	355000	346500	353000	350500	360100	336500
Number of visits: average	50714	49500	50429	50071	51443	48072
Change %	1,4	-2,5	1,8	-0,7	2,7	-7

VILMAT-based development plan to the year 2010, and in summer 2006 the development aims and financing needs for the period 2007–2015 were updated. These included the targets for the Government Productivity Programme, the funding already established for VILMAT, the targets, where applicable, for the new Government Tourism Strategy, and the Tourism Action Plan for 2007–2013. The project also extended to an examination of the growth in the number of visits to sites run by Metsähallitus on the basis of trends in recent years and new forecasts for growth. There are 42 areas examined in the updated version and 24 areas where the focus is on tourism. To achieve the targets for 2015 a total of 43.2 million euros is needed in the period 2007–2015. The number of visits by tourists is expected to go up from 4.4 million in 2005 to 6.3 million in 2015.

The Forest Research Institute's Metinfo service also contains statistics on the recreational use of forests. The data were last updated in 2003. A new project to investigate the recreational use of nature has been drafted under the auspices of the Ministry of the Environment. It is to be inaugurated in 2006 as a collaboration between the Finnish Forest Research Institute, Statistics Finland and other actors.

The Institute has drafted a proposal for indicators of the social sustainability of forestry, as part of the NFP's review process. The proposal states that recreational use indicators should produce data on its supply and demand and the balance between them. It goes on to remark that, in addition to quantitative indicators on use and potential use, information is needed on the quality of services.

3.5.3. Promoting co-operation

The Nature Product Theme Group operates under the Rural Policy Committee. Its term expired at the end of 2005. Its activities included the publication of Natural Product magazine with one to eight issues a year, the production of brochures, the maintenance of a website, and the organisation every year of a national seminar for the sector.

The Theme Group also promoted the implementation of the Rural Policy Programme (2005–2008). One of its aims is that everyone should be able to enjoy contact with nature, adventure travel services and tranquillity.

3.6. Strengthening forest know-how

The aim of the National Forest Programme 2010 is to improve forest know-how by strengthening innovation in the forest sector based on research, education/training and internationalisation.

3.6.1. Closer co-operation and coordination between research programmes, action plans and centres of excellence

The Wood Products Sector Industrial Policy Programme 2004–2010 drawn up under the Finnish Ministry of Trade and Industry was produced in 2005 and became integrated with the Government Resolution on the Promotion of the Use of Wood and Wood Building. The Industrial Policy Programme defines the key areas of know-how which need to be addressed in training, research and development up to the year 2010.

Skills and know-how in the wood products sector are also improved with project work, for which the PuuSuomi (WoodFinland) quality programme established in 2006 is responsible. It continues in the footsteps of the PuuSuomi action programme that ended in 2005. The PuuEurooppa (WoodEurope) campaign ended in 2005.

On 7 April 2005 the Government issued a Resolution on the Structural Development of the Public Research System. The Resolution states that, in the new programming period for centres of excellence starting in early 2007, the work will become more clearly part of a national policy on innovation. In the area of forests, two proposals were drafted for skills clusters for the centre of excellence period 2007–2013: Lappeenranta's Forest Industry Future Skills Cluster will focus on the pulping industry and Lahti's Housing Skills Cluster on wood building and the furniture industry. Bioenergy is included in the Future Energy Technologies Skills Cluster at the Centre of Excellence in Jyväskylä.

In 2006 the Finnish Work Efficiency Institute investigated how well research was being put into practice. Under scrutiny were three subjects of research by the Finnish Forest Research Institute, the role of the Forestry Development Centre Tapio as a supplier of information on them, and data and opinions on these studies by professional forest bodies (Forestry Centres, Forest Management Associations and companies). The main conclusion was that more efficient ways of providing information on the findings of research that could be put into practice were needed. In 2006 Tapio, in the strategy it had drawn up, considered the transfer of research data its strategic aim. Under a framework agreement of co-operation, the Finnish Forest Research Institute and Tapio have been working more closely together under a framework agreement in the entire research process since late 2006, from the planning of research projects to the practical transfer of the results of research.

3.6.2. Research in the forest sector as part of the European research environment and the biotechnological potential

European Technology Platforms (ETP) represent a new form of action in joint European research. Their task is to bring together key practical actors in the field and leaders and trend-setters in research and technology, and coordinate joint European research in the sector. The aim of the organisations is to establish a common strategy for the sector's future research needs. The Forest-Based Sector Technology Platform's Strategic Research Agenda, headed by the forest industry and forest owners, appeared in February 2006 and research projects based on the Agenda have started up. The research topics proposed in the FTP's SRA are covered reasonably well in the search for funding under the EU's Seventh Framework Programme for Research.

A national research programme referred to as the Finnish Forest Cluster Research Strategy, out in October 2006, also had a European background. Simultaneously with the research strategy, a concentration of strategic top expertise was established, whose task it would be to take the research strategy forward in tangible ways. Metsäklusteri Oy was set up to organise and administer the concentration. Among its owners are the companies in the forest industry and the Forest Research Institute. Its main sponsors are Tekes (Finnish Funding Agency for Technology and Innovation) and the Academy of Finland.

To implement the Finnish Forest Cluster Research Strategy research projects will need to be launched as swiftly as possible so that the forest cluster reform can quickly get under way. With this in mind, the Keskuslaboratorio (KCL), The Forest Research Institute and VTT (Technical Research Centre of Finland) have launched an electronic workstation on the internet for planning projects called the Finnish Forest Cluster Research Portal. The portal offers a medium where initiatives can be presented, commented on and collated. The aim is to facilitate and expedite the establishment of research projects and researcher consortia in the forest cluster.

The Wood Material Science Research Programme, set up as a collaboration among Finnish and Swedish funding agencies, is at the decision stage. The Programme has established a basis for the coordinated use of national research resources and thus has made Finnish and Swedish actors also able to respond to future initiatives exploiting the European Research Area (ERA) operational model.

WoodWisdomNet, coordinated by Tekes, is an EraNet project under the EU's Sixth Framework Programme. Its purpose is to network European research programmes on the forest and wood sector. The programme got under way in January 2004. WoodWisdomNet's first joint search for a research programme started in November 2006. A good 20 million euros in funding is on offer for the period 2008–2010. The sponsors are the European Commission and national research sponsors from Finland, Sweden, Norway, Denmark, Germany, France and the UK.

The Forest Research Institute has launched a biotechnology and genetic engineering strategy, which places the emphasis on the Institute's responsibility as a body which implements the results of strategic research in the field and which encourages coordination among different actors. Research into genetic engineering in Finland is actively networked with the Nordic SamNordisk Skogsforskning (SNS) – funded GENECAR (Centre of Advanced Research in Forest Genetics and Tree Breeding) project. The connection to the Network of Excellence EVOLTREE project is an example of the way opportunities offered by the EU have been exploited. Noteworthy in terms of international co-operation are also the plant genomics and WoodWisdom-EraNet initiatives, in which Finnish researchers are actively involved.

3.6.3. Promoting knowledge of the forest sector

In 2005 a series of 'forest days' and 'forest weeks' for school-children were held across the country. It was a collaboration between the Finnish Forest Association, the Forestry Centres, the Forest Management Associations, the forest industry, the 4H Organisation, and the education departments of municipalities in such areas as Ostrobothnia, Kainuu, northern Karelia, south-western Finland and the Helsinki area. The project has grown and is starting to establish its format.

In autumn 2005 new syllabi were introduced into the Finnish school system (grades 1–9), in effect for approximately 10 years. Thanks to the work of the national steering committee of 'Metsän oppimispolku' (a website supporting forest education), the criteria for the syllabi now incorporated an understanding of forest-based industry and business and the aims of comprehending the sustainable use of natural resources. Schools implement these learning aims independently, relying, for example, on materials produced by the Finnish Forest Association, which has traditionally been produced in partnership with the Association of Biology and Geography Teachers. Having an impact on the aims of courses will also be important in the future to keep people generally familiar with the forest sector.

The revised criteria for forest certification included an obligation to assemble regional forest sector actors to promote knowledge of forest skills and the forest sector among children and young people. This includes special forest days and trips for children at schools and in daycare. School coordinators employed by the Forestry Centres convene meetings of actor networks who are drawing up local action plans. The plans should have been completed by the end of 2006.

The 'Metsän oppimispolku' website (www.oppimispolku.fi) has become an information channel for forest sector study materials and contacts in the sector. It helps to prepare the content of events, materials and courses introducing the forest sector.

The Finnish Forest Association monitors the way Finnish people relate to forests and forestry by means of surveys. The forest barometer, produced in March 2006, is a means of sounding out children and young people on the subject of forests. 72% of respondents receive their information on forests from school and 24% from their parents. More details on the findings from the forest barometer survey as well as the forest and wood study to discover the opinions of mainland Finns aged between 15 and 79 on forests, which was carried out in October-November, 2005, are to be found at www.smy.fi/Barometrit.

The Forest.fi website, a joint forest sector exercise, which gives up-to-date information on the sector in English and Finnish, was opened in 2005.

The 'Kurva metsään' campaign to boost awareness of professional training in the forest sector has been continued. It involves TV and radio advertising and materials production for teachers and fairs.

3.6.4. Wood harvesting skills and services and training services as products for export

Finland aims to improve the quality of vocational training in forest machinery at European level. It also aims to boost the attractiveness of vocational training and promote mobility in vocational training and among those who have qualified professionally. Finland heads the development of the ECVET (European Credit Transfer System Vocational Education and Training) project. Harmonised credits and comparisons regarding basic and further vocational training are being introduced in examinations/qualifications which are recognised in different countries. A similar system in higher level training (ECTS: European Credit Transfer and Accumulation System) for forest managers and forestry engineers, for example, has already been introduced.

Co-operation with the neighbouring areas extends to the third forest programme for North-West Russia (a Finnish-Russian collaboration), which supports training in sustainable forestry in Russia. Under the Academy of Finland's Muuttuva Venäjä ('Changing Russia') research programme, the Forest Research Institute is implementing a huge project whose objective it is to apply Finnish sustainable forestry know-how and skills to the changes under way in forest management and wood harvesting in Russia.

In addition to active bilateral international co-operation with Russia, China, Mexico and Brazil, co-operation with Turkey began in 2005. Bilateral co-operation also helps to promote opportunities for commercial partnership in the export of wood harvesting expertise and technology.

Forestry colleges have also developed facilities for providing courses for foreign students in English.

3.6.5. Broadening of education and research and co-operation in business, research, training and administration in the forest sector

The interim evaluation of the National Forest Programme conducted in spring 2005 mapped out areas which needed further development relating to training, research, internationalisation, the Future Forum for the Forest Sector and communications in the forest sector. Crucial among these were:

- The broadening and diversification of education and research
- Moving the focus of education and research closer to the end of the production chain

- Increasing co-operation with the business world, research in the forest sector and educational institutes, as well as administrative departments
- Developing the allocation and coordination of resources for research among both Finnish and foreign research institutes
- Linking the Future Forum on Forests more directly to practical actors
- Improving communications and information flow between the wood production industry and the finished product market.

Forecasts suggest that the structural change in the forest owner population will increase the demand for forest services, which will call for modernisation/reorganisation and development of their supply. People with multisectoral skills in forestry and who are involved in the sale of wood, advice and guidance services, forest planning, practical forest work, and traditional janitor work will in future have the best chances of being employed year round. In the reform of the basic degree syllabus in forestry which started in autumn 2006, forest studies are being developed in order that courses for forest workers and forest nature managers can be combined and that the Tapio forest nature examination is also incorporated in the new programme of studies. The profile of training for forest machinery mechanics is to be raised as a training course of its own is being produced. The new basic qualification in forestry will thus probably incorporate training courses for forest workers and forest machinery operators and mechanics. The image of the training of forest machinery mechanics will also be strengthened by means of various development projects sponsored by the National Board of Education. The criteria for the new training programmes, syllabi, etc. are to take effect by autumn 2007.

On 13 November 2006 the Ministry of Education set up a working group with the task of examining education and training in forestry and wood in general and at all educational levels. The project was intended to cover wood production, wood harvesting, forest bioenergy and the chemical and mechanical processing/upgrading of wood.

In 2004 the Finnish Science and Technology Policy Council commissioned a structural evaluation of the Public Research System. Part of this was published in a report by Jussi Huttunen on the structural and functional development of the state operations. It contains a number of recommendations for measures for various ministries and their sectoral research institutes. On 17 March 2005 the Ministry of Agriculture and Forestry and the Ministry of Education appointed a working group to make proposals to implement the recommendations requiring co-operation between the two ministries. The group completed their task on 31 May 2006. The joint proposal includes closer co-operation in the areas of technology, economic research and laboratory work.

The Science and Technology Policy Council also produced a report by the 'Neuvo' group, which came out in January 2007. Sectoral research should be supervised at the Government level. The group proposed the creation of development measures which would essentially be used for activities under the customer-producer model. The field of sectoral research would be established as four theme areas, where forest research would come under sustainable development. The 'customer consortium' would decide on how around half the money for sectoral research should be spent.

In 2005 the heads of European research institutes drew up a common vision for the need for strategic information on the forest cluster. The work was finalised under the supervision of the European Forest Institute. Finnish Forest Research Institute was also involved in this.

In 2005–2006 several reports surveying the future of the forest sector were produced, including that by the Working Group on the Future of the Paper Industry entitled 'The Paper Industry: the state of the industry and future challenges'. Others include the Forest Research Institute's background survey 'Welfare based on Finland's forests 2015. A survey of developments in the Finnish forest sector and future options' (Metla's work reports 26/2006) and 'A Future Review of the Forest Sector: Outlines of the Forest Council concerning focuses and aims for the forest sector.' (Min. Ag. publications 11/2006). The essential findings from the first phase (1 April 2003 – 31 March 2005) of the Future Forum for the Forest Sector appeared in the report 'A Successful Forest Sector and Future Challenges'. The Forum's second phase runs until 31 March 2008.

3.7. Finland active in international forest policy

The aim of the National Forest Programme is to promote sustainable forestry through an active international forest policy, co-operation in research and education/training, and communications in the fields of forestry and the environment.

3.7.1. Multilateral co-operation

The fifth session (UNFF5) of the United Nations Forum on Forests (UNFF) in May 2005 was unproductive and it was decided to continue talks on further international co-operation on forests in 2006. At UNFF5 it became very evident that not all countries were as yet prepared to start negotiations on an international treaty on forests. The alternative of a binding forests charter was proposed.

At UNFF6 in February 2006 the EU also supported a charter on forests that would not be legally binding. It was decided to extend the UNFF's remit at least until the year 2015. The major achievement at UNFF6 is the adoption of four global objectives to be accomplished by 2015. They concern: (i) halting the de-

struction of forests, (ii) increasing the benefits to be derived from forests, (iii) increasing the number of conservation areas and other sustainably used and managed forests, (iv) halting the decline in development aid for forests.

The intention is that a UNFF work programme for 2007–2015 will be drawn up at UNFF7 in April 2007 and a non-legally binding instrument on forests adopted. The next evaluation of the effectiveness of international forest co-operation will be in 2015, when a decision will be taken on the continuation of the work of the UNFF and the possibility of commencing talks on an actual international treaty on forests.

Finland headed the drafting of an EU proposal in September 2006 for an instrument on the world's forests, which was not legally binding and which was submitted to the UNFF's Secretariat. The EU's objective is for the non-legally binding instrument to be a mid-stage solution before an international treaty on forests is agreed.

The eighth meeting of the Conference of the Parties to the UN Convention on Biological Diversity was held in Brazil in March 2006. The meeting examined the progress of the implementation of the forest programme of work under the Convention and adopted some concrete objectives in the programme. Only the objective for protection of the forests is qualitative. The target set was that at least 10% of each of the world's forest types would be effectively protected. Countries were urged to draw up national and/or regional aims and targets and incorporate them in appropriate strategies and action plans. At the meeting it was also mentioned that the use of genetically modified trees should be restricted or prohibited for the time being. It was decided that the Precautionary Principle should be followed with genetically modified trees.

In the period 2005–2006 a new International Tropical Timber Agreement (ITTA, 2006) within the framework of the United Nations Conference on Trade and Development (UNCTAD) was negotiated. The agreement is likely to enter into force in 2008. The new agreement includes a new financing channel for special programmes, intended to help member countries target their resources at areas thought by all to be important. When the agreement's implementation was being discussed, Finland, in EU talks during its Presidency of the EU in autumn 2006, proposed that regional Forest Law Enforcement and Governance (FLEG) projects should be funded within the framework of the ITTA, in order to prevent illegal logging.

In 2005–2006 talks continued within the context of the United Nations Framework Convention on Climate Change (UNFCCC) on how greenhouse gas emissions from the destruction of tropical forests could be reduced using the means afforded by the Convention beyond the first commitment phase (2008–2012).

3.7.2. Ministerial Conferences on the Protection of Forests in Europe

In 2005 and 2006 the programme of work drafted after the Ministerial Conference on the Protection of Forests held in Vienna in 2003 was continued with the organisation of seven seminars on various themes. These were rural development, illegal logging, intersectoral co-operation, the cultural significance of forests, the European recommendations on afforestation in connection with the Climate Convention, the development of criteria and indicators for sustainable forestry and the classification of vegetation in forests. Finland attended almost all the seminars.

In 2005 the Ministerial Conferences' Warsaw contact unit produced a survey on the implementation of national forest programmes in Europe, which was based on another survey for European countries conducted in 2004. The survey shows that 20 European countries have produced and implemented or are producing a national forest programme which follows the principles adopted at the Ministerial Conference in Vienna.

The next Ministerial Conference on the Protection of Forests will be chaired by Poland and Norway in Warsaw in November 2007. The main theme proposed for the Warsaw Conference is 'Forests for Life' or 'Forests for Quality of Life'. To prepare for the conference, countries sent in their proposals for topics, which were discussed at a meeting in spring 2006. The proposals and the meeting paved the way for two resolutions, one of which concerns water and its connection with forests, and the other the use of forests as a source of energy. A ministerial declaration is also being prepared for the conference. The declaration highlights how important forests are also in addressing the problem of climate change. Finland proposed the competitiveness of the forest sector as one subject area for the conference in Warsaw. The subject was thought to be important in itself, but it did not receive support as a subject for a resolution. The draft declaration and resolutions were developed further in autumn 2006 at a meeting of experts and the work will be continuing in 2007 in several small groups, which Finland will also be joining.

3.7.3. EU action

Finland was an active participant in the European Commission's working groups preparing the EU's Forest Action Plan, which got started in 2005. In June 2006 the Commission published a communication on the plan. This served as the basis for the European Council's conclusions on the action plan during the Finnish EU Presidency in autumn 2006.

The implementation of the EU's five-year Forest Action Plan (2007–2011) will start in 2007. It contains 18 key measures, grouped under four main objectives, which are:

- 1) long-term improvement in European competitiveness in the forest sector
- 2) improvement to, and conservation of, the state of the environment
- 3) better quality of life
- 4) fostering coordination and communications

One of the most important objectives for Finland is better coordination of forest matters in the European Commission. The proposal is to appoint coordinators of forest matters for the most relevant Directorates-General.

2005 saw the adoption by the EU of the permit system in connection with the Council's FLEGT regulation (Forest Law Enforcement, Governance and Trade). The aim is to try and limit access to illicit timber in EU markets. At the same time, a mandate for negotiations was approved for the Commission to initiate partnership agreement talks with countries outside the EU. Finland has been actively involved in drawing up the criteria for the permit system (e.g. verification of the legal status of timber and monitoring of sources).

The Forest Focus Regulation (on the monitoring of the health of forests) expired at the end of 2006. In the autumn that year Finland did the preparatory work for continuing the monitoring of forests within the framework of the EU. A Finnish expert worked in the Commission on the monitoring of forests from 2005 to 2006.

3.7.4. Bilateral co-operation

The third phase of the Sustainable Forestry and Biodiversity Development Programme in North-West Russia, which is financed within the framework of Finland's neighbouring area co-operation programme, began in 2005. The three-year long North-West Russia Forest Programme, administered by the Ministry of

Agriculture and Forestry, focuses on the development of further education and training in Russia's forest sector in collaboration with the Russian Federation's Forestry Agency. Russia's forest sector is being reorganised and modernised and there is demand for Finnish know-how. The Russian side, however, is now required to pay the costs of its own participants in collaborative projects.

The forest sector working group under the Finland-Russia Economic Commission also fostered co-operation at official level in the period 2005–2006. The working group subcommittees – on sustainable forestry, the trade in wood and investment – act as forums where Finnish forestry actors can ask questions and make their remarks to the Russian authorities.

Co-operation on forests with China has been going on since 1981 with meetings convened every two years. That held towards the end of 2006, the 14th, was in Beijing. There an agreement was reached on five joint projects for 2007–2008. There has been a brisk exchange of visits between groups in the forest sector.

Juha Korkeaoja, Minister of Agriculture and Forestry, visited Mexico in spring 2006, when an updated forest co-operation memorandum was signed with the forest commission CONAFOR. The main focus is still on the implementation of the national forest programme. The co-operation agreement extended to a visit by a delegation from the Mexican state of Durango to Finland to find out about the country's forestry and National Forest Programme. In addition, the executive committee of CONOSIL, the new forest owners' organisation at federal level in Mexico, visited Finland to learn about the Finnish forest owners' organisations and signed a co-operation agreement with the Finnish Central Union of Agricultural Producers and Forest Owners (MTK).

4. The work of the Regional Forest Councils 2005–2006

On 24 March 2004 the Ministry of Agriculture and Forestry set up Regional Forest Councils at the Forestry Centres for a term lasting from 1 January 2004 to 31 December 2006. The Forest Councils consist of all the main forestry actors regionally and a good number of other representatives of important forestry actors, such as stakeholder organisations and NGOs. Some of the Forest Councils also have a technical working committee to prepare the Forest Council's work.

The Regional Forest Councils met two to four times each year. During the review phase, the main task of the Councils was to help the Forestry Centres draw up the Regional Forest Programmes for 2006–2010. The Councils split up into working groups to carry out the programme work. In one Forestry Centre the working group procedure was replaced by sounding out public opinions, which involved different bodies and agencies. Opinions were received on the draft programmes with the help of website questionnaires, seminars and meetings of stakeholder groups.

A broadly-based support group for the regional forestry target programmes was set up by the Ministry of Agriculture and Forestry to assist the Forestry Centres and Regional Forest Councils in their programme work. A working group report (Min. Ag. For. Working group publications xx/2006) was produced on the Regional Forest Programme work, and the group's secretary, Timo Weckroth, Licentiate in Agriculture and Forestry, produced/edited a summary of the Regional Forest Programmes (Min. Ag. For. publications 5/2006). The summary was used in the NFP revision work when the Forest Sector Future Review approved by

the Forest Council was being drawn up (Min. Ag. For. Publications 11/2006).

The implementation of the new Regional Forest Programmes started within the framework of the resources available in 2006. The task of the Regional Forest Councils is to monitor the progress of the Programme implementation and promote it from their own point of view. To make the work more effective the Forestry Centres have set up working groups for selected priority areas and drawn up more detailed development programmes. Implementation particularly gives attention to the cross-sectoral nature of the Forest Programmes and their compatibility with other regional development programmes, such as the Rural Development Programme and the Regional Development Programme.

In 2006 the Forestry Centres for the first time published the Forest and Environment Survey, based on the findings of a Tapio-headed development project. The Survey combined the Regional Forest Programme follow-up report, the Forestry Environment Report and the Forestry Centre Annual Report.

The National Forest Council and the Regional Forest Councils continued to work closely together. The Regional Forest Councils were represented on the Forest Council by Karen Wik-Portin of the Forestry Centre of the Coastal Regions. Her deputy is Economic Counsellor Markku Heikkinen from Tohmajärvi. Markku Heikkinen was also a member of the Regional Forest Programme support group. In both the years the reports were compiled, the Forest Council heard a summary of the implementation of the Regional Programmes. It also became acquainted with the content and implementation of the Regional Programmes on visits to the Forest Council districts of Rovaniemi, Kirkkonummi and Loppi. A summary of the Regional Programmes for 2006–2010 was presented at a meeting of the Forest Council in March 2006. The NFP's Secretary-General attended each Regional Forest Council meeting in the period 2005–2006.

ANNEXES

Annex 1. The work of the Forest Council 2005–2006

1. Tasks and composition of the Forest Council and its Secretariat

Tasks

The Ministry of Agriculture and Forestry appointed the present Forest Council on 29 June 2005 to assist the Ministry in broadly-based and essential forest policy matters, to monitor the implementation of Finland's National Forest Programme 2010 and to review the Programme. The Forest Council's term of office expires on 28 June 2008.

Composition of the Forest Council (deputy in brackets):

Chairman:

Juha Korkeaoja, Minister of Agriculture and Forestry
(Aarne Reunala, Director-General, Ministry of Agriculture and Forestry)

Members:

Ilkka Heikkinen, Nature Conservation Manager, Ministry of the Environment
(Pirkko Isoviita, Chief Forester, Ministry of the Environment)

Paula Nybergh, Industrial Counsellor, Ministry of Trade and Industry
(Reima Sutinen, Senior Adviser, Ministry of Trade and Industry)

Seija Kivinen, Special Adviser, Ministry of Finance)
(Petri Syrjänen, Special Adviser, Ministry of Finance)

Kaija Kivinen, Senior Adviser, Ministry of Social Affairs and Health
(Hannu Jokiluoma, Development Manager, Ministry of Social Affairs and Health)

Annu Jylhä-Pyykönen, Counsellor of Education, Ministry of Education)
(Seppo Niinivaara, Counsellor of Education, Ministry of Education)

Silja Hiironniemi, Senior Director, Ministry of the Interior)
(Veijo Kavonius, Regional Development Director, Ministry of the Interior)

Hannu Jokinen, Director, Metsähallitus
(Jan Heino, Managing Director, Metsähallitus; until June 2006)

Leena Finér, Professor, Finnish Forest Research Institute
(Hannu Raitio, Senior Director, Finnish Forest Research Institute)

Karen Wik-Portin, Director, Forestry Centre of the Coastal Regions
(Markku Heikkinen, Economic Counsellor, Regional Forest Councils)

Matti Peltola, Managing Director, Trade Association of Finnish Forestry and Earth Moving Contractors
(Simo Jaakkola, Vice Managing Director, Trade Association of Finnish Forestry and Earth Moving Contractors)

Timo Tanninen, Secretary-General, WWF Finland
(Harri Karjalainen, Forest Manager, WWF Finland)

Antti Sahi, Forest Director, Finnish Central Union of Agricultural Producers and Forest Owners (MTK)
(Timo Nyrhinen, Vice Forest Director, Finnish Central Union of Agricultural Producers and Forest Owners (MTK))

Håkan Nystrand, Chairman, METO – Forestry Experts' Association.
(Tapio Hankala, Executive Director, Society of Finnish Professional Foresters)

Tauno Partanen, Deputy Chairman of the Board, Finnish Hunters' Central Organisation
(Jari Pigg, Assistant Executive Director, Finnish Hunters' Central Organisation)

Hannu Valtanen, Director, Finnish Forest Industries Federation (until June 2006)

Anne Brunila, Managing Director, Finnish Forest Industries Federation (July – November 2006)

Anders Portin, Director, Finnish Forest Industries Federation (from December 2006)

(Pekka Kallio-Mannila, Attorney, Finnish Forest Industries Federation (until December 2005))

Jouni Väkevä, Forest Expert, Finnish Forest Industries Federation (January – November 2006)

(Antti Otsamo, Forest Issues Manager, Finnish Forest Industries Federation (from December 2006))

Sauli Kovanen, Head of Department, Finnish Paper Workers' Union

(Petri Vanhala, Secretary-General, Finnish Paper Workers' Union)

Lauri Ainasto, Secretary, Finnish Wood and Allied Workers' Union (Sakari Lepola, Head of department, Finnish Wood and Allied Workers' Union)

Harri Hölttä, Forest Expert, Finnish Association for Nature Conservation

(Sini Harkki, Forest Expert, Finnish Association for Nature Conservation (until May 2006))

(Ilpo Kuronen, Nature Conservation Manager, Finnish Association for Nature Conservation (from June 2006))

Liisa Sahi, Organisation Manager, Guides and Scouts of Finland (Tuomo Jantunen, Executive Director, Suomen Latu)

Jaana Heinisaari-Säteri, Vice Managing Director, FM Timber Team Oy/Finnish Sawmills

(Jukka-Pekka Ranta, Executive Director, Finnish Sawmills)

The Forest Council's Secretary-General is Marja Kokkonen from the Ministry of Agriculture and Forestry. The Ministry decides on the number of secretaries the Forest Council should have. The Forest Council has temporary working groups and a Secretariat, as and when necessary.

Meetings of the Forest Council

The Forest Council meets four times a year. The documents for the meeting are emailed out a week in advance. One meeting a year takes place in the form of a field trip. The 2005 and 2006 agendas included the following topics:

March 2005

- National Forest Programme follow-up report 2004
- Evaluation of the Finnish Biodiversity Programme

June 2005

- Development of the National Forest Programme
- Progress in Metsähallitus's Dialogue Process

September 2005

- Forest Council Action Plan 2005–2008
- Report on METSO
- Preparatory work on the National Energy and Climate Strategy

December 2005

- Forest Council Action Plan 2005–2008
- Basis of the Future Review for the Forest Sector
- Report on METSO
- Reform of the Act on the Financing of Sustainable Forestry
- Preparatory work on the EU's Forest Action Plan

March 2006

- National Biodiversity Programme
- Implementation of the National Forest Programme in 2005
- Regional Forest Programmes 2006–2010; work of the Regional Forest Councils
- Metla's forestry sector environment analysis and scenarios

May 2006

- Future Review for the Forest Sector: vision and provisional strategic goals

June 2006 (meeting and field trip)

- Future Review for the Forest Sector: structure and main policies

September 2006

- Future Review for the Forest Sector – Outlines of the Forest Council concerning focuses and aims for the forest sector. Discussion and adoption of the text.
- Future phases in the review of the National Forest Programme

December 2006

- Report on METSO
- Forest Council Action Plan for 2007

Secretariat

The Secretariat of the Forest Council has the main task of preparing the work of the Council, which makes all the decisions on principles and strategies. The tasks of the Secretariat are:

- to prepare the meetings of the Forest Council
- to prepare matters as set down in the Forest Council Action Programme 2005 - 2008,
- and follow and promote the implementation of the programme
- in the review of the National Forest Programme, to coordinate the working groups so that the Future Review and Programme constitute a balanced whole and to reconcile the National Forest Programme 2015 with forest-related actions in other sectors and international agreements and principles concerning forests
- to present the progress of the review work to the Forest Council
- to prepare current forest policy issues for the Forest Council
- to draft the National Forest Programme follow-up report (2007).

Representatives of the Forest Council working groups are included in the broad composition of the Secretariat. When necessary the Secretariat invites experts to speak at the meetings.

Chairman:

Aarne Reunala, Director-General, Ministry of Agriculture and Forestry, Chairperson

Marja Kokkonen, Secretary-General of National Forest Programme, Ministry of Agriculture and Forestry

Members:

Pirkko Isoviita, Chief Forester, Ministry of the Environment

Reima Sutinen, Senior Adviser, Ministry of Trade and Industry

Eero Autere, Planning Manager, Forestry Development Centre Tapio

Matti Hirvonen, Outdoor Recreation Manager, Suomen Latu

Simo Jaakkola, Vice Managing Director, Trade Association of Finnish Forestry and Earth Moving Contractors

Ilpo Kuronen, Nature Conservation Manager, Finnish Association for Nature Conservation

Timo Nyrhinen, Vice Forest Director, Central Union of Agricultural Producers and Forest Owners

Kaarlo Ouni, Director, Pirkanmaa Forestry Centre

Kari Pelkonen, Environment Manager, Metsähallitus (until October 2006)

Petri Heinonen, Environment Manager, Metsähallitus (from November 2006)

Pasi Puttonen, Research Director, Finnish Forest Research Institute

Jouni Väkevä, Forest Expert, Finnish Forest Industries Federation.

2. Forest Council working groups and their tasks

The implementation and review of Finland's National Forest Programme takes place in broad co-operation between public and private organisations. There are four working groups that monitor and review the Programme. The basic material for the working group meetings is mainly produced at the Ministry of Agriculture and Forestry and institutes in its administrative sector. The working groups comment on the material and make proposals for their own specific tasks. The working groups may, if necessary, invite experts to speak, increase their numbers or split up into smaller sections. If necessary, the number, composition and tasks of the working groups are revised. The Forest Council endorsed the current working groups and their tasks in December 2005.

Working group 1. Economic sustainability of the forest sector

The task of this working group is:

- to make proposals for the Future Review and Programme review from the perspective of these priorities in the National Forest Programme 2010: 'Opportunities for growth in the forest industry', 'Forestry should be profitable and provide employment', 'Forests should be well managed' and 'Strengthening forest know-how'

- to make proposals for new priorities in the Future Review
- to promote the implementation of the National Forest Programme 2010 in the priority areas listed above.

Members on 1 January 2006:

Pentti Lähteenoja, Deputy Director-General, Ministry of Agriculture and Forestry, Chairman

Reima Sutinen, Senior Adviser, Ministry of Trade and Industry, Deputy Chairman

Marja Hilska-Aaltonen, Counsellor of Forestry, Ministry of Agriculture and Forestry

Teppo Lehtinen, Senior Adviser, Ministry of the Environment

Seppo Niinivaara, Counsellor of Education, Ministry of Education

Antti Halkka, Editor, Finnish Association for Nature Conservation

Tapio Hankala, Executive Director, Society of Finnish Professional Foresters

Simo Jaakkola, Vice Managing Director, Trade Association of Finnish Forestry and Earth Moving Contractors

Antti Koskimäki, Director, Häme-Uusimaa Forestry Centre

Marko Mäki-Hakola, Research Director, Central Union of Agricultural Producers and Forest Owners

Timo Määttä, Departmental Manager, Motiva Oy

Håkan Nystrand, President, METO Forestry Experts' Association
Ville Ovaskainen, Special Researcher, Finnish Forest Research Institute

Olli Puukko, Marketing Manager, Metsähallitus

Jukka-Pekka Ranta, Managing Director, Finnish Sawmills

Juha Vaajoensuu, Leading Technology Expert, Finnish Funding Agency for Technology and Innovation (TEKES)

Jouni Väkevä, Forest Expert, Finnish Forest Industries Federation

Harri Hänninen, Senior Scientist, Finnish Forest Research Institute, Secretary

Hannu Niemelä, Silviculture Manager, Forestry Development Centre Tapio, Secretary

Working group 2. Ecological sustainability of forests

The task of this working group is:

- to make proposals for the Future Review and Programme review from the perspective of these priorities in the National Forest Programme 2010: 'Securing ecological sustainability' and 'Strengthening forest know-how'
- to monitor and comment on the evaluation of the METSO Programme
- to make proposals for new priorities in the Future Review
- to promote the implementation of the National Forest Programme 2010 in the priority areas listed above.

Members on 1 January 2006:

Marjukka Mähönen, Senior Adviser, Ministry of Agriculture and Forestry, Chairman

Mikko Kuusinen, Senior Adviser, Ministry of the Environment, Deputy Chairman
 Anna Rakemaa, Senior Adviser, Ministry of Agriculture and Forestry
 Hannu Ilvesniemi, Professor, Finnish Forest Research Institute
 Harri Karjalainen, Forest Manager, WWF Finland
 Jyrki Ketola, Organisation Manager, METO - Forestry Experts' Association
 Jouko Kostamo, Environment Manager, Forestry Development Centre
 Panu Kuokkanen, Conservation Biologist, Metsähallitus
 Ilpo Kuronen, Nature Conservation Manager, Finnish Association for Nature Conservation
 Kari Nieminen, Director, Southwest Finland Forestry Centre
 Timo Nyrhinen, Vice Forest Director, Central Union of Agricultural Producers and Forest Owners
 Suvi Raivio, Nature Expert, Finnish Forest Industries Federation
 Aarne Wahlgren, Environment Protection Manager, North Karelia Environment Centre
 Paula Horne, Researcher, Finnish Forest Research Institute, Secretary
 Harri Tukiola, Senior Researcher, Finnish Environment Institute, Secretary

Working group 3. Social and cultural sustainability of the forest sector

The task of this working group is:

- to make proposals for the Future Review and Programme revision from the perspective of these priorities in the National Forest Programme 2010: 'Forests for recreation and natural products' and 'Strengthening forest know-how', and the perspectives of balanced regional development, cultural sustainability of forests, and citizens' involvement
- to make proposals for new priorities in the Future Review
- to promote the implementation of the National Forest Programme 2010 in the priority areas listed above.

Members on 1 January 2006:

Liisa Saarenmaa, Forest Counsellor, Ministry of Agriculture and Forestry, Chairman
 Pauli Wallenius, Multiple Use Manager, Metsähallitus, Vice Chairman
 Kaisa-Leena Lintilä, Regional Development Director, Ministry of the Interior
 Paula Nybergh, Industrial Counsellor, Ministry of Trade and Industry
 Raija Seppänen, Senior Architect, Ministry of Agriculture and Forestry
 Kirsi Viljanen, Senior Adviser, Ministry of Agriculture and Forestry
 Lauri Ainasto, Union Secretary, Finnish Wood and Allied Workers' Union

Sini Harkki, Forest Expert, Finnish Association for Nature Conservation
 Matti Hirvonen, Outdoor Recreation Manager, Suomen Latu
 Harri Karjalainen, Forest Manager, WWF Finland
 Mikko Häyrynen, Financial Editor, Metsälehti
 Simo Kyllönen, Researcher, University of Helsinki
 Sirpa Kärkkäinen, Manager, School Contacts, Finnish Forest Association
 Päivi Luoma, Manager, EU Policy, Finnish Forest Industries Federation
 Ristenrauna Magga, Board Member, Sami Parliament
 Tauno Partanen, District Forester, North Savo Forestry Centre
 Paavo Pelkonen, Professor, University of Joensuu
 Risto Päivinen, Director, Professor, European Forest Institute (EFI)
 Juha Rutanen, Secretary, Finnish Network of Nature Entrepreneurs
 Pekka Salminen, Nature Conservation Counsellor, Ministry of the Environment
 Tomi Salo, Sectoral Manager, Trade Association of Finnish Forestry and Earth Moving Contractors
 Susanna Sieppi, Communications Manager, Finnish Forest Industries Federation
 Jukka Sippola, Organisation Manager, Society of Finnish Professional Foresters
 Jouni Suoheimo, Counsellor of Education, National Board of Education
 Jorma Tolonen, Director, Kainuu Forestry Centre
 Aki Tuominen, Organisation Manager, Guides and Scouts of Finland
 Liisa Tyrväinen, Professor, Finnish Forest Research Institute
 Paula Viertola-Jern, Special Adviser to Management, Central Union of Agricultural Producers and Forest Owners
 Pertti Viik, Executive Director, Reindeer Herders' Association
 Matti Heikurainen, Senior Adviser, Ministry of Agriculture and Forestry, Secretary
 Leena Petäjistö, Senior Scientist, Finnish Forest Research Institute, Secretary

Working group 4. International forest policy

The task of this working group is to:

- to make proposals for the Future Review and Programme revision from the perspective of these priorities in the National Forest Programme 2010: 'Finland active in international forest policy' and 'Strengthening forest knowhow'
- to make proposals for new priority areas in the Future Review
- to promote the implementation of the National Forest Programme 2010 in the priority areas listed above.

This working group is the Advisory Board for International Forest Policy.

Members on 1 January 2006:

Aulikki Kauppila, Acting Forest Counsellor, Ministry of Agriculture and Forestry, Chairperson

Olavi Luukkanen, Professor, University of Helsinki, Deputy Chairperson

Markku Aho, Counsellor of Development Co-operation, Ministry for Foreign Affairs

Erja Fagerlund, Senior Adviser, Ministry of Trade and Industry

Leena Karjalainen-Balk, Special Adviser, Ministry of the Environment

Elina Nikkola, Senior Adviser, Ministry of Agriculture and Forestry

Kirsi Taipale, Principal Administrator, Legal Affairs, Ministry of Agriculture and Forestry

Taina Veltheim, Senior Adviser, Ministry of Agriculture and Forestry

Lea Jylhä, Forest Expert, Central Union of Agricultural Producers and Forest Owners

Susanna Sieppi, Communications Manager, Finnish Forest Industries Federation

Harri Karjalainen, Forest Director, WWF Finland

Ilmo Kolehmainen, Director, Forestry Development Centre Tapio

Håkan Nystrand, President, METO Forestry Experts' Association

Harri Hölttä, Forest Expert, Finnish Association for Nature Conservation

Jari Varjo, Director of Research Centre, Finnish Forest Research Institute

Anne Vehviläinen, Senior Adviser, Ministry of Agriculture and Forestry, Secretary

3. Co-operation with the Regional Forest Councils

Representatives of the Ministry of Agriculture and Forestry's Forests Department who work in the Forest Council's Secretariat attend meetings of the Regional Forest Councils in the role of liaison officers. The representative of Regional Forest Councils in the National Forest Council is Karen Wik-Portin (with Economic Counsellor Markku Heikkinen deputising), who presents a summary of the implementation of the Regional Forest Programmes once a year.

In June 2005 the Forest Council made a trip to the Lapland Forestry Centre in the Rovaniemi region, and in June 2006 visited Kirkiniemi and Lohja in the territory of the Forestry Centre of the Coastal Regions to learn about the implementation of Regional Forest Programmes.

4. Participation and communications

The purpose of communications in the NFP is to describe what the Programme is, why it exists, what it is trying to do and, in particular, what it has accomplished. The annual communications plan, which is drawn up each year, is based on the notion that communications should be transparent, committed, and

target group-oriented. The target groups for communications are actors in the forest sector and their stakeholder groups, agencies and bodies/representatives of other sectors working closely with these actors, forest owners, various forest user groups, the media and the general public. Websites are used to communicate internationally with those representing various levels of administration, buyers of wood-derived products, environmental conservation organisations and research and development organisations, as well as forest sector actors and experts at international seminars and other events.

The following were the key communications events in the period 2005–2006:

- The NFP got a new logo in March 2006. It is used in publications, brochures and slide shows and on websites and gifts such as NFP pins and rulers.
- The NFP's website pages in Finnish, Swedish and English were revised when the Ministry of Agriculture and Forestry opened its new site in March 2006. The NFP is being made more user-friendly and the English and Swedish versions in particular need to be supplemented. The NFP 2010 site is part of the Ministry's 'Metsät' ('Forests') web pages.
- A summary of the Regional Forest Programmes was published in March 2006: Weckroth, T. 2006. Regional Forest Programmes 2006–2010. Summary of the Forest Centre Programmes (Min. Ag. For. 4/2006).
- The Ministry of Agriculture and Forestry's forest policy newsletter *Käpy* ("Conifer") is also the newsletter for the NFP. Almost every issue has the latest information on the NFP.
- The brochures 'Sustainable Welfare from Diversified Forests' and its version in Finnish came out in spring 2006. A poster with the same title (in Finnish) was also produced.
- The report 'National Forest Programme 2010 – Multiple Use of Forests' came out in June 2006. This English version is available as a pdf file on the internet.
- 'Metsäsektorin tulevaisuuskaatsaus – Metsäneuvoston linjaukset metsäsektorin painopisteiksi ja tavoitteiksi' was published by the Ministry of Agriculture and Forestry (11/2006) which appeared in English as 'Future Review for the Forest Sector – Outline of the Forest Council concerning focuses and aims for the forest sector' (Min Ag. For. 11b/2006) and on the internet in Swedish as 'Skogssektorns framtidsöversikt – Skogsrådets riktlinjer för skogssektorns tyngdpunkter och mål' (Min. Ag. For. 11a/2006).
- The 'Future Review for the Forest Sector' was presented at a ministerial press conference on 2 October 2006. On 8 November 2006 a seminar on the Review was held at the Finnish Parliament for the Agriculture and Forestry Committee, Environment Committee, Commerce Committee and Agricultural Section of the Finance Committee. The Future Review was also presented at Future Forum for the Forest Sector events as well as at a number of other events, e.g. at Regional Forest Council meetings and meetings of experts and working groups and training events organised by the Forest Centres and other organisations.

Annex 2. Implementation of the Forest Biodiversity Programme for Southern Finland (METSO) 2005–2006

This section describes the implementation of the Forest Biodiversity Programme for Southern Finland (METSO) in the period 2005–2006. The Ministry of Agriculture and Forestry and the Ministry of the Environment are responsible for, and coordinate the implementation of, the Programme's 17 measures and communications. The Programme will continue in 2007, but the results of its follow-up and final evaluations are already available. The experience gained from METSO will serve as a basis for the Forest Biodiversity Action Programme (2008-2016), whose drafting is getting started.

1. Restoration and management of habitats in nature conservation areas

The objective is to restore and maintain the value and state of existing nature conservation areas. There are an estimated 700 nature conservation areas or nature programme sites in the METSO area, covering a total area of 33,000 hectares.

During the period 2005–2006 a total of 7,850 hectares of forest and mire/peatland were restored in the METSO area (Table 1). Decaying spruce and pine were created in regenerated stands both individually and in groups. The planning of restoration and management relies on basic data for each area of standing timber and growth sites obtained from field inventories for stands (Collection of basic data on nature conservation areas).

Table 1. Area in hectares of forest restoration for each type of measure and annually in the METSO area.

Year	Restorations of forests	Restoration of mires/peatlands	TOTAL (hectares)
2005	2 635	1 610	4 245
2006	2 267	1 338	3 605
TOTAL	4 902	2 948	7 850

Wooded traditional biotopes were tended and managed in an area measuring a total of 755 hectares (Table 2). The surface area for the management of traditional biotopes continues to grow, but other types of nature management are one-off projects. Other types of nature management include, for example, the management of forests with white-backed woodpeckers and herb-rich forests.

Table 2. Management and reconditioning/restoration of wooded traditional biotopes and other nature management in the METSO area.

Year	Traditional biotopes in standing timber (hectares)	Other nature management (hectares)
2005	729	105
2006	755	127
TOTAL	755	232

2. Collection of basic data on nature conservation areas

The objective is to collect basic, consistent and comprehensive data on standing timber in stands and growth site data from over 500,000 hectares of nature management areas by the year 2006. Equivalent data will also be gathered from nature conservation areas on private land.

The collection of basic data on both state- and privately owned nature conservation areas is in progress. Data were collected on the key characteristics of the structure, natural state and activity of habitats in the conservation areas. Most of the basic data was collected when habitat inventories were being undertaken. In the southern parts of the METSO area almost all the inventory work was done in the form of a habitat inventory in the field, but further north remote sensing technology was also used. When the habitat inventory was being undertaken data were collected on the physical features in each stand, such as growth sites, standing timber, number of decaying trees and natural state. The inventory was completed according to the plan by the end of 2006 (Table 3).

Table 3. Progress over two years in inventories in state conservation areas in the METSO area (in hectares).

Year	Total area for inventories	Total area for inventories (%)
2005	424,749	85%
2006	497,911	100%*

*) the start of 2006 there were 499,279 hectares of conservation area in the METSO area

By the end of 2006 basic data had been collected and documented on around 32,000 hectares of private conservation area. This is approximately 30% of the estimated land area of private conservation areas.

3. Establishing biological criteria for nature conservation

The objective is to determine the biological criteria for nature conservation to help select sites for trial METSO projects or for the targeting of measures.

The biological criteria for nature conservation in the Forest Biodiversity Programme for Southern Finland were established in a working group memorandum in May 2003. Data were also gathered on the feasibility of the criteria in monitoring and evaluating the METSO Programme and proposals received to develop them.

In 2006 application of the 2006 criteria in Metsähallitus's nature management project was examined

4. Natural values trading

With natural values trading the landowner concludes an agreement to maintain or improve natural values in his forest and receives payment for this. The objective is to preserve and improve biodiversity in areas which are exploited commercially.

The trial natural values trading project began in 2003 in the territory of the Southwest Finland Forestry Centre. With natural values trading, a landowner offers a site to the Forestry Centre, where an expert assesses its natural values. If the site is found to have natural values which fit the biological criteria for nature conservation, terms and conditions, including payment, are discussed with the landowner. If an agreement comes about, it is for a fixed term only. When the agreement ends the area continues to be used in the way the owner wishes.

In 2005 and 2006 over 80 landowners offered sites for natural values trading. This covered a total area of just under 1,000 hectares. In 2005 and 2006, 55 agreements with 55 landowners were concluded on a total of 665 hectares, 483 of which met the biological criteria for nature conservation. The average payment for sites meeting the criteria was around 150 euros per hectare a year and the average land area of sites was 11 hectares. In most cases the sites protected were heath forest with decaying trees in abundance, but protection also extended to hardwood swamp, forests on land uplift coasts, herb-rich woodlands and wooded traditional biotopes.

5. Competitive tendering

With competitive tendering, the environmental authorities invite landowners to offer sites for conservation and state the prices they are willing to accept for the arrangement. The areas which meet the biological criteria for nature conservation most satisfactorily are selected.

The competitive tendering trial ended in 2005. The sum of 1 million euros had been set aside for it in 2004 and 2005. The trial sites chosen were eastern Uusimaa, North Savo and municipalities in southwestern Lapland. By the end of 2005 eight private conservation areas covering a total of 79 hectares had been es-

tablished and 12 fixed-term conservation agreements covering 91 hectares had been made. One site (16 hectares) was purchased to the state.

During 2006 the environment centres in the trial area continued talks with landowners on the offers received during the trial period. That year three 20-year conservation agreements (9.5 hectares) were made in Uusimaa, and six (61 hectares) were made in southwestern Lapland. One private conservation area was also established.

In 2006 1 million euros of METSO's land acquisition funds were transferred in the first state budget of the year to be used to establish private conservation areas. The transfer was justified as not all the landowners were willing to sell their land to the state: in fact some expressly wished to establish a private conservation area. The use of this appropriation as compensation may be linked to the competitive tendering trial. Talks on areas were partly postponed until 2007, but in 2006 four private conservation areas were created, measuring a total area of 92.1 hectares.

6. Nature management areas

Nature management areas are sites established, on application by landowners, in which nature conservation, silviculture, the use of forests and other commercial uses are reconciled.

On 17 October 2005 the Joint Forest Nature Services Initiative in the area of Yläne-Mynämäki was submitted to the Ministry of the Environment and the Ministry of Agriculture and Forestry. The nature surveys in the area began with nature management funding.

7. Using Metsähallitus's revenue from land sales and land exchange for the acquisition of areas with high conservation value

Metsähallitus will acquire forest areas which are valuable in terms of biodiversity using the revenues it has earned from sales of land. A new 10-year financing programme, linked to the competitive tendering project mentioned earlier, began in 2005.

Both in 2005 and 2006 5 million euros was available for land acquisitions under the METSO Programme. This opportunity was marketed in five main priority areas. Marketing was mainly targeted at private landowners. By the summer of 2006 104 sites covering a total of 3,202 hectares had been bought or were being negotiated for the state. In 2006 1 million euros was transferred from the appropriation for competitive tendering (see section 5). The funding programme will run until 2014.

8. Pilot project: co-operation network for forest biodiversity

In the pilot project regarding a co-operation network for forest biodiversity, forest biodiversity will rely on independent initiatives and voluntary participation at local level. The parties who join the networks will be landowners, local authorities, NGOs and other partnership agencies.

Four projects were chosen for the co-operation network at the end of 2004. These were: Hämeen Metso, Lohja District MetsäVasu, the Central Karelia Herb-rich Forest Network and the From Sea to Forest project. The pilot project for networking ended in 2006 and they have been separately evaluated (Finnish Environment 45/2006).

The **Hämeen Metso** co-operation network covered four municipalities in the Kanta-Häme and Päijät-Häme regions. Its mission statement was the widest possible network of co-operation, biodiversity information and know-how, in which actors in the area could be broadly involved in the implementation of the METSO Programme. Furthermore, with regard to the acquisition of sites, the network aimed at joint and flexible management of sites using a project team made up of the main actors. The approach was search for the most appropriate form of funding together with the landowners.

In Hämeen Metso the year 2005 was the busiest year for acquiring sites, with 19 new agreements made. Eight agreements were concluded in 2006. In 2005 there had been a lot of active information dissemination and marketing in Hämeen Metso, including the production of a model site route for the training of professionals and forest owners. In 2006 the main thrust of the work was evaluation and reports.

In the **MetsäVasu** project (2004–2006) local co-operation was developed in western Uusimaa. The aim was to get forest owners interested in the possibilities of voluntary conservation and to train forest professionals and landowners in nature and wildlife.

In 2005 and 2006 clerical staff were trained, field trips and training were organised for forest owners, and the Hiisi Nature Atlas was produced. A total of 42.7 hectares of forest were protected, of which 14.2 hectares were natural values trading areas, nine hectares private nature conservation areas and 19.5 hectares sites under the environmental aid for forestry.

When the private nature conservation areas were being established, compensation was paid according to the value of standing timber. The average price for natural values trading transactions was 212 euros per hectare a year and environmental aid was 174 euros per hectare a year. It was mainly decaying stands of heath forest which were protected (22.9 hectares). After that came herb-rich woodlands (8.1 hectares), southern deciduous

forests (3.6 hectares), forest flood plains (2.1 hectares), hardwood swamp (2.8) and other valuable nature sites (3.2 hectares).

The first agreements in the **Central Karelia Herb-rich Forest Network** project were made in 2005. In 2006 there was more obvious activity among landowners and, in addition, the work of previous years to promote networking began to pay off. In this network all the METSO methods used in the co-operation networks were exploited.

In the **From Sea to Forest** co-operation network project various means were used to try and protect the succession series on land uplift coasts. The other aim of the project was to improve the knowledge which forest professionals, landowners and the general public had of the protection of land uplift coasts. The project divided into two independent sub-projects.

In **North Ostrobothnia** two representative sample areas were selected. In all, 213 hectares of coastal land were protected under the project. Forest owners were mostly interested in the natural values trading scheme, and a total of 163 agreements were made. Twenty-six hectares of land were bought for the state. Environmental aid agreements under Finnish law were made for 24.2 hectares. Compensation under the natural values trading scheme averaged 565 euros per hectare for 10 years, plus 68 euros per hectare for planning costs, also to run for 10 years. The average environmental aid payment was 398 euros per hectare for 10 years, plus 182 euros per hectare for planning costs, also to run for 10 years. An average of 6,400 euros per hectare was paid to landowners for land purchased. The natural habitats included 90 hectares of herb-rich woodlands, 60 hectares of flood plains and 6 hectares of hardwood swamp, in addition to the succession series on land uplift areas.

The work of the **Ostrobothnia** co-operation network was very much forest owner-oriented. The local project team took its decisions with reference to how much land forest owners were making available. More than 60 forest owners offered a total of 358 hectares for forest protection. In 95% of cases the biological criteria for nature conservation are met. These areas contain entire succession series and most contain old coniferous and mixed forest. While the project was running, landowners signed the following types of agreement: natural values trading (75 hectares), environmental aid for forestry (2 hectares), and land protection/nature reserve (23 hectares).

9. Nature conservation programme based on the Nature Conservation Act

METSO has decided that a decision will be made on the forest conservation programme for Southern Finland and Ostrobothnia in 2007.

10. Nature management in commercial forests

The shortcomings in the aid system for nature management in private forests are to be rectified under the Act on the Financing of Sustainable Forestry, and environmental aid must be increased. Metsähallitus will improve the way biodiversity is taken account of in commercial forests, improve the efficiency of inventories of areas with high conservation value and enhance protection at special sites in commercial forests and in areas adjacent to conservation areas.

At the start of 2007 the Parliament of Finland passed the Act on the Financing of Sustainable Forestry. Under the new Act, the criteria for calculating environmental aid will now depend on the examination of individual sites. Environmental aid will be based on the logging value of a site, from which an excess amount is deducted. The examination of individual sites will increase aid levels slightly. On the other hand, basic compensation under the present environmental aid scheme will be scrapped. Under the new act, forest nature management projects may be financed in the same way as now. A new type of aid will be that for prescribed burning, which promotes forest diversity. According to the transitional provision of the new Act, METSO pilot projects can be financed until the end of 2008.

The nationwide survey of habitats of special value under the Forest Act ended in 2004, except for the Forest Centre areas of Lapland and North Ostrobothnia. In 2006 the sum of 7 million euros was set aside for environmental aid in the state budget. The University of Jyväskylä conducted an analysis of the quality and reliability of the survey of habitats of special importance under the Forest Act (Finnish environment 29/2006). It showed that there were a lot of errors and flaws in the documentation. The survey work in the field will be improved when the areas previously surveyed are included once again in forest planning. Not all the sites can be surveyed beforehand, which will be taken account of in forestry operations. Habitats of special importance in the forests in all the forest owner groups cover a total area of around 130,000 hectares.

Spring 2005 saw the completion of Metsähallitus's Nature Management Project for Commercial Forests. This involved a survey of just under 340,000 hectares of state commercial forests. The inventory resulted in the protection of a total of 4,952 hectares of land. The project made possible locally important protection solutions covering small areas and more uniform and better protection of some conservation areas or nature sites.

11. Training, forest planning and advice

There has been an increase in the need for information on forest diversity. Nature management degree courses have helped in the development of training in the forest sector under the aus-

pices of the Ministry of Education. Forest planning will be developed in a direction that takes account of biodiversity if the landowner in question so wishes. The emphasis is on landscape ecological planning. The scope of application and practical application of section 6 of the Forest Act are to be developed under the supervision of the Ministry of Agriculture and Forestry.

The Ministry is to commission an evaluation of the success and areas for improvement concerning the advice given on forest biodiversity in 2005.

The National Board of Education is using the experience gained from the nature management degree courses in its revision of the criteria for the basic degree syllabus and the vocational skills examination in forestry begun in 2006 and in the development of further education in forestry. The Board has included components of the nature management degree syllabus in the syllabi for the discipline of natural resources.

Due consideration of the aims of forest owners is an established practice in forest planning for individual holdings.

Metsähallitus has implemented most of the recommendations for improvement submitted by the international evaluation team which assessed landscape ecological planning. Landscape ecological planning is integrated with natural resources planning and has thus become one coherent process for land use planning. The aim has been to clarify how stakeholders can participate in planning and to strengthen their role.

Towards the end of 2005 a brochure appeared on felling at special sites as referred to in section 6 of the Forest Act. It was a collaboration between the Ministry of Agriculture and Forestry, the Forestry Development Centre Tapio, and WWF Finland.

In November 2005 the Ministry of Agriculture and Forestry commissioned the Forest Research Institute to conduct an evaluation of the success and areas of improvement concerning the advice given on forest biodiversity. The report's first part came out in June 2006. The second part (the impact of advisory services on the management of retention trees) is to appear in the spring of 2007.

12. Habitats of special importance under the Finnish Forest Act, and the Finnish Forest and Fungi Damage Prevention Act

Habitats of special importance under the Forest Act are to be promoted and their definitions harmonised. The Ministry of Agriculture and Forestry's Decision on the prevention of insect and fungi damage is to be revised.

The reform of the statutes on the prevention of insect and fungi damage to forests is linked to the legislative review on Forest

Centres. The legislative proposal regarding this is being debated in the Finnish Parliament. The project coordinated by MOSSE (Forest Biodiversity and Monitoring Programme) and entitled 'Storm Damage Management' ended in late 2006.

13. Protecting biodiversity in municipal forests for recreation and outdoor activities and state hiking areas

The objective is to promote biodiversity by assisting in the planning of municipal forests for recreation and outdoor activities and state hiking areas and by developing measures to reconcile recreational use, the aims connected with protecting biodiversity and forestry. The exploratory work began in 2005.

In April 2005 the Ministry of the Environment set up a working group to develop measures to reconcile the recreational use of nature, the aims connected with forest diversity, and forestry in municipal forests for recreation and outdoor activities. The group's task was also to look at how municipal forests for recreation and outdoor activities and state hiking areas could support the present conservation areas and thus enhance the viability of the conservation area network. The working group saw fit to include the district recreational areas and national urban parks in the work. The group's work was completed at the end of 2006.

14. Need for research and surveys

There is to be more research, especially into the ecological, economic and social aspects of biodiversity. Research and follow-up studies will also be needed in the evaluation of pilot projects.

The last financing year for research projects under MOSSE (Forest Biodiversity and Monitoring Programme for South Finland) was 2006. MOSSE's final seminar was held on 4–6 September 2006. The extensive research report entitled 'METSO on jäljillä' ('on METSO's trail') was produced for the seminar. It contained the latest research data on the ecological, economic and social impact of the protection of forest diversity. It supports the evaluation of METSO. The report was the result of a collaboration involving several research programmes and projects, and more than 140 researchers took part in producing it.

PUTTE, the Research Programme for Little-known and Threatened Forest Species, will continue to run until the end of 2007. This is the largest ever appropriation allocated to research into species all at the same time in Finland. In the period 2003–2005 the appropriation was 1–1.6 million euros a year

A third METSO research programme is TUK ('Safeguarding Forest Biodiversity: policy instruments and socio-economic impact'), which began at the start of 2005. Under this a follow-up

and evaluation report was produced on METSO's ecological, economic and social impact, which was published on 3 November 2006. TUK's purpose is to conduct an assessment of the impact of measures taken within the framework of METSO up to the year 2010. The aim is to produce, collate and circulate a diverse selection of research data of top scientific quality on how forest biodiversity can be safeguarded and the interactions within the society.

15. Forest conservation foundation

The possibilities of a forest conservation foundation based on voluntary contributions to be used as an additional means of financing forest biodiversity will be explored.

A preliminary investigation into a forest conservation foundation was completed in June 2004. A working group appointed by the Ministry of the Environment continued the preparatory work.

16. Monitoring and evaluation of the Programme

The Forest Council is to monitor METSO's overall progress, together with the Forest Ecological Sustainability Working group (MEKKE).

The monitoring and evaluation of METSO undertaken by the Finnish Forest Research Institute and the Finnish Environment Institute resulted in three interim reports in the period 2005–2006, the research report 'on METSO's trail' in conjunction with the research programme, and a final report.

The evaluation shows that the measures had in the main been implemented in accordance with the Government Resolution. METSO succeeded in its aim to create a new working culture and diversify the range of measures to safeguard biodiversity. There is an obvious need for a wide-ranging programme of measures and financing, with clear-cut goals, to safeguard forest biodiversity.

17. Government recommendations

The recommendations for forest management by forest organisations are to be reviewed in the near future with reference to new research data and practical experience. The reviews are to focus particular attention on preserving mature aspen and decaying trees.

In summer 2006 the Forestry Development Centre Tapio reviewed its recommendations for good forest management. The recommendations include an acknowledgement of METSO's biological criteria for nature conservation in commercial forests. Aspen and decaying trees, of special importance for

diversity, were taken account of by stressing the importance for biodiversity of increasing the number of important structural features in commercial forests. These criteria are also contained in the Finnish Forest Certification System (FFCS), revised in 2004.

18. Communications

The main channels for communications have been the METSO website and newsletters. The website can be found at www.mmm.filmetso and www.ymparisto.filmetso. Material in English can be viewed at www.mmm.filmetsol/international. Other organisations have also featured METSO in their own information channels.

In 2005 and 2006 35 newsletters appeared, 13 in Finnish (METSONlehtiä), 13 in Swedish (METSObladett), and nine in English (METSO Newsletter).

During the review period two films on METSO were commissioned, one on restoration ('Nature Returns') and one on MET-

SO sites. The 'Nature Returns' film has the commentary in Finnish, Swedish and English, and the METSO sites film has English subtitles.

METSO had its own exhibition at the annual Metsäpäivät ('Forest Festival'), at the FARMARI agricultural fair in Tampere in July 2005, at the ELMA Helsinki Food and Agriculture Show in November 2005, and in Jyväskylä at the EU Ministerial Conference on Competition in July 2006. METSO was also the subject of a presentation at the EU Conference of Environment Ministers in Turku in June 2006 and the EU Conference of Agricultural Ministers in Oulu in September 2006. METSO took part in the EU's Green Week event in Brussels in May 2006.

During the review period there were four METSO seminars: the 'METSO soitimella' ('METSO beckons') annual seminar (Tampere 13 April 2005), the Forest Restoration seminar (Heureka Science Centre 17 January 2006) the METSO IV annual seminar (Turku 29 March 2006), and the final seminar of the MOSSE Research Programme 'MOSSE maalisuoralla' ('MOSSE in the home straight') (Espoo 4-6 September 2006).

Annex 3. Further measures proposed in the follow-up reports for 2000, 2001 and 2002–2003

OPPORTUNITIES FOR GROWTH IN THE FOREST INDUSTRY:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. The Government maintains and promotes the preconditions for the wood processing industry through its policies, especially energy and transport policy.
2. The relevant operators and authorities implement the Wood Europe project and Centres of Excellence in the wood sector as well as promote the networking of companies operating in the wood sector, especially small companies located in rural areas.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

3. Decisions on energy policy influence energy supply and competitiveness in the forest industry. The debate on nuclear power in the Finnish Parliament and the impact of the possible decision to build more nuclear energy plants on the state of the forest industry are monitored.
4. The Wood Europe campaign is continued in order to increase value added and promote exports.
5. Studies are conducted on the impact of the changes in the forest taxation system.

In the follow-up report for 2002-3 the Forest Council proposed the following further measures:

6. The joint projects between the wood products industry and the Government will end by 2005. To ensure that they continue, a new programme needs to be drawn up. It would support international co-operation in the standardisation of products, in research, in sales promotion and in networking between SMEs and the rest of the industry. A common financing model needs to be developed for this, one which also covers sources of financing currently used.
7. As volumes of imported wood grow, the importance of where it comes from increases, on account of the debate which has begun on illegal logging and the EU's Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community. A thorough analysis needs to be made of the impact of increasing wood imports on the implemen-

tation of the NFP 2010, the practice of forestry and the Finnish economy.

8. The Finnish forest sector is dependent on international trade, and so Finland is in favour of free trade and free competition, and therefore the forest certification system must be preserved as something that is geared to the market and independent of the authorities. Finland should act in such a way that the EU's aid policy does not distort competition in the forest industry within the internal market of the EU.
9. If the upkeep of private roads and transportation in the forestry sector are to be viable, state aid for the upkeep of private roads needs to be trebled and co-operation from administrative sectors improved.

FORESTRY SHOULD BE PROFITABLE AND PROVIDE EMPLOYMENT:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. In order to secure the favourable development of forests, the increase in felling should primarily be aimed at first thinnings and peatland, and new technology should be developed to promote the exploitation of these two areas.
2. The Government, especially the Ministry of Trade and Industry, will continue with its energy policy to encourage the increase the production of wood-based energy.
3. The social partners should strive to increase the attractiveness of the forest sector among young people making their career choices and develop forest labour statistics in collaboration with the Finnish Forest Research Institute.
4. The area covered by regional forest planning will be raised to about one million hectares per year in accordance with the goals set in the National Forest Programme 2010. During the programming period the area covered by the plans should increase to 75% of the surface area of private forests.
5. The sections on forestry in the Rural Policy Programme will be implemented according to the principles laid down by the Government.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

6. Energy wood use, harvesting and statistics of energy wood are developed to allow them to reflect to the statistics on industrial roundwood markets.
7. Working conditions in the forest sector are developed to reinforce the attractiveness of the sector as well as the work ability of employees, clerical staff and entrepreneurs.
8. Attention is paid to the development of the profitability of forestry, especially the harvesting of wood, and the required logging volumes as recommended in the N F P 2010.

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

9. To improve the profitability of forestry, more economic forest management procedures need to be developed, price trends for domestic wood should take account of costs, and work needs to be done which is timely for the improvement of forests.
10. It is important for working conditions in forestry and the profitability of small companies in the sector to guarantee year-round employment for workers, if necessary by diversifying their traditional job description to include service responsibilities. To achieve thinning targets the work needs to be made more economical by developing harvesting technologies, providing workers with more training, improving conditions on worksites and evolving guidelines for forest management.
11. Basic forestry training and education needs developing. The bioenergy field needs its own basic courses. There need to be more people starting courses in forest machinery and operating and driving timber vehicles. The number of training places for forest workers needs lowering. As a result of the reorganisation of jobs in forestry, vocational courses at lower and higher level must also be geared towards preparing participants to start up as independent entrepreneurs.
12. As it is so small, the forest sector does not figure in statistics on working conditions, so an independent system is needed to monitor working conditions in the sector and improve them.
13. The increase in the use of forest energy needs to be based on economic viability, and its supply should be integrated with the supply of roundwood. There is still a need for state funds to develop new technologies relating to the use of the forests as an energy source. The Forest Management Associations must be encouraged to procure and supply wood for energy and develop local forest energy networks. The principles for measuring forest energy should be incorporated in legislation. The combined use of forest energy and peat in a way that benefits both activities should be promoted.

SECURING ECOLOGICAL SUSTAINABILITY:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. Nature conservation programmes will be implemented by 2007 under the financial programmes for conservation programmes ratified by the Cabinet Committee on Economic Policy.
2. Efforts will be made to raise the financing for the management of conservation areas at least to the level proposed in the NFP 2010. The proposed 16 million should be achieved by 2003.

3. The Committee for the Conservation of Forests in Southern Finland, appointed in December 2000, will draft proposals for a target, financing and action programme for forest conservation in Southern Finland, western parts of the Province of Oulu and southwestern Lapland by the end of June 2002.
4. The results achieved through the nature management measures will be examined, including, for example, how well the habitats of special importance support the preservation of endangered species in commercial forests.
5. Adequate funding for forest ecosystem management will be ensured. The marketing of forest ecosystem management and that of the use of environmental aid for forest owners will be stepped up, especially in connection with advisory services and forest planning.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

6. Development of the biodiversity of forests in Southern Finland is continued based on the work of the Committee on Forest Biodiversity in Southern Finland.
7. Water protection in forestry is developed in the way envisaged in the target programme for water protection 2005 and the Water Framework Directive of the European Union. In particular, drainage reconditioning and soil preparation (tillage) are planned and realised so that the burden on waters is minimised. In the protection of groundwater measures are targeted at the particularly important areas according to the national inventory of groundwater resources as well as other groundwater areas suitable for the provision of water.
8. Environmental aid will be reallocated from the survey of habitats of special importance referred to in the Forest Act to nature management projects as of 2004.

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

9. METSO funding needs to be guaranteed during the trial period. Beyond 2007 too, state money needs to be channelled towards securing forest biodiversity.
10. There needs to be greater focus than ever on targets for reducing nitrogen load under the target programme for water protection, so that the Government Resolution of 1998 on water protection and the targets in the EU Water Framework Directive are achieved. Funding under the Act on Financing of Sustainable Forestry should be extended to all crucial measures for water protection in drainage reconditioning on private land.
11. It is important for Finland's climate policy that the measures in NFP 2010 are implemented, i.e. that the forest carbon sink effect is retained and, at the same time, that alternative energy sources, rather than fossil fuels, are made available. As the Wood Products Sector Industrial Policy Programme and the Timber Construction

Promotion Programme are being drawn up, climate issues need to be taken into consideration. The impact on the carbon balance of drainage reconditioning and the restoration of bogs should be investigated.

12. Sufficient funding in the form of appropriations needs to be allocated to the management of private nature conservation areas, ensuring that management and maintenance needs are covered.
13. The Forest Research Institute should start to keep statistics on forest conservation, as far as their resources allow, contributing to Finland's official statistics.

FORESTS SHOULD BE WELL MANAGED:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. Forestry Centres and Forest Management Associations together with wood buyers market the silvicultural and forest improvement measures to forest owners. Marketing will be intensified through the Tomorrow's Forests campaign. The Ministry of Agriculture and Forestry monitors the progress of measures under the Act on the Financing of Sustainable Forestry and tries to remove obstacles to an increase in accomplished work.
2. Forestry actors adopt the revised recommendations and guidelines on silviculture, taking into account the objectives for economically, ecologically and socially sustainable use of forests in the NFP 2010.
3. Together with other forestry actors, the Finnish Forest Research Institute develops statistics on silvicultural and forest ecosystem management measures and forest improvement.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

4. Not all the targets set for silvicultural work can be achieved with current levels of funding. An examination of the different types of work involved should be included in the evaluation of the NFP, and new forms of financing and ways of improving labour productivity should be examined.
5. Silvicultural and forest improvement work is promoted by means of the Tomorrow's Forests communications campaign.
6. The priorities in the work under the Act on the Financing of Sustainable Forestry in 2002 are drainage reconditioning, especially the development of water protection, and the tending of young stands. Special attention is paid to improving the quality of forest regeneration and the restoration of areas damaged by storms.

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

7. If the volumes of silvicultural work and basic improvements are to be maintained at the levels prescribed in the NFP 2010, the real value of state aid should not fall. There needs to be an improvement in the way silvicultural work and basic improvements are planned and organised. The tending of seedling stands should be carried out at a time which is appropriate in terms of wood production and the economic perspective.
8. For the Act on the Financing of Sustainable Forestry to be made clear, the harvesting of energy from forests should be made a separate exercise or have its own law enacted. The harvesting of energy from forests must be undertaken in a way that is ecologically and economically appropriate.
9. The wintering elk population should be reduced to cut the amount of damage elks do to agriculture, forestry and traffic. The census of the winter population of deer needs improvement and the system of compensation for damage should be reviewed.
10. A viable system for monitoring the quality of forest regeneration regionally and at the level of each actor/operator has evolved. Its impact should be studied in a future project by 2006.
11. The combined harvesting of industrial roundwood and energy from forests in drained area should be developed further.

FORESTS FOR RECREATION AND NATURAL PRODUCTS:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. In the state budget adequate funds will be allocated to the construction and maintenance of hiking, camping and other recreation services.
2. The implementation of the proposals for measures supporting the objectives of the NFP's VILMAT working group will be promoted.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

3. Research and training in the recreational use of nature and nature tourism is increased, and innovations developed in the context of the Future Forest Halls project.

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

4. To increase opportunities for recreation use, the Outdoor Recreation Act should be reformed so that the numbers of scheduled deliveries are restricted by the government and that deliveries have to be on the basis of rules and compensation concerning the care of forests for recreational use adjacent to routes.

5. A special team consisting of actors in the sector should be set up to develop and coordinate the recreational use of forests.
6. The municipalities (local authorities), Metsähallitus and other actors need to collaborate on information services on recreational use and nature tourism.
7. There should be better statistics on the recreational use of forests.

STRENGTHENING FOREST KNOW-HOW:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. The Ministry of Agriculture and Forestry and the Finnish Forest Association will launch the Future Forest Halls project in connection with the Forest Forum for Decision-Makers.
2. Forest Centres will launch activities based on the Learning Path for Forests in their districts.
3. The Ministry of Education will appoint a working group to study how training in forestry and the timber industry prepares participants for international activity.
4. Basic funding for the Centre of Excellence in the wood product sector will be bolstered under the guidelines on the Government's Rural Policy Programme.
5. There will be more on forest issues in the school biology and geography syllabus.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

6. Co-operation and coordination between the Wood Wisdom II research programme, WoodFinland action programme, the nationally networked Centre of Expertise for Wood Products and the WoodEurope Campaign are increased, with putting research information into practice a special objective.
7. Activities promoting familiarity with the forest sector from pre-school to high school level are continued.

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

8. The educational system for the forest sector needs developing with regard not only to what is required in Finland but also from the point of view of the European education markets. The aim is to make educational services a product the forest cluster can export.
9. Research in the forest sector needs a boost within the context of the European research environment. There

needs to be dynamic development of research into biotechnology in the forest sector.

10. Activities promoting familiarity with the forest sector from pre-school to high school level should continue.
11. Finnish skills and know-how in the wood harvesting and services sectors should be promoted further as a product for export.

FINLAND ACTIVE IN INTERNATIONAL FOREST POLICY:

In the follow-up report for 2000 the Forest Council proposed the following further measures:

1. Finland takes an active part in international processes and the work of different organisations. In the next few years the most important global issues in forest policy will be the UN Forum on Forests (UNFF), forest issues in the Convention on Biological Diversity and the Northern Dimension.

In the follow-up report for 2001 the Forest Council proposed the following further measures:

2. Co-operation with the Russian forest sector is continued in accordance with the principles agreed at the Moscow Summit in March 2002.
3. Preparations for the Fourth Ministerial Conference on the Protection of Forests in Europe in Vienna in 2003.
4. Further study on the impact of EU enlargement on the forest sector and reassessment of the Finnish positions on forest policy in the EU

In the follow-up report for 2002–3 the Forest Council proposed the following further measures:

5. Finland should try to ensure that a decision is taken at the last meeting of the UN Forum on Forests in 2005 on the commencement of talks on a treaty on forests. At the same time Finland should be actively involved in the components of the Convention on Biodiversity and the Convention on Climate Change which pertain to forests.
6. Finland should aim to strengthen the implementation of the EU Forest Strategy and improve its coordination in the European Commission and interinstitutionally in the EU. It will be important for Finland to have Finnish forest experts also working in the Commission.
7. Bilateral co-operation on forests should continue in the areas of international forest policy with important countries such as Russia, China, Mexico, Brazil, Indonesia and others.

Annex 4. The Government Programme of Prime Minister Matti Vanhanen's Cabinet on the Forest Sector

1. General

During Prime Minister Matti Vanhanen's term of office a new kind of programme management as well as policy programmes were applied to furthering and monitoring the Government Programme. In the National Strategy Documents for 2003–2006 a decision was taken on the implementation of policy programmes and other cross-administrative policies, such as the National Forest Programme. The Strategy Documents were realised within the framework of state budgets and financial frameworks.

The Government Programme's theme has been to create new prosperity through work, entrepreneurship and joint responsibility. Special attention has been paid to employment, skills, entrepreneurship, basic services, regional development and preparations for the effects of an ageing population. The transport and communications infrastructure has been improved and ecological issues addressed, especially those relating to climate and energy.

At an informal evening session on 14 February 2007, the Government adopted the Government Programme's follow-up report (Prime Minister's Office Publication Series 6/2007). The most essential measures regarding the development of the forest sector is concerned have been selected for this report.

2. Entrepreneurship Policy Programme

Improvements in entrepreneurs' unemployment and social security, measures contributing to education in entrepreneurship, substantial tax reductions and changes in the taxation system are among the most important general policy measures of the Government with regard to entrepreneurship.

To promote the idea of starting up as an entrepreneur, the policy measures for education in entrepreneurship at different educational levels published by the Ministry of Education in 2004 were adopted. The commercial status of universities has been promoted by making it possible for them to own shares.

The proposals of the Social Security of Entrepreneurs 2004 working group have been implemented by improving the unemployment security, the reimbursement of medical expenses and occupational healthcare in respect of entrepreneurs and members of their families. Start-up money has been extended to apply not only to the unemployed but also those leaving paid employment or domestic work and those ending their studies to become entrepreneurs.

General conditions for entrepreneurship have been further enhanced by additional investments in research and development, and the capital management of start-up companies, such as the increases in the state's partial compensation of credit and guarantee losses caused to Finnvera Oyj by start-up and growth companies. A fund specialising in the seed financing of innovative start-up began under the auspices of Finnvera Oy in autumn 2005, supplementing the new capital instruments established in 2004 by Tekes (Finnish Funding Agency for Technology and Innovation) and Teollisuussijoitus ('Industry Investment') Oy. A growth company service provided by Tekes, Finnish Employment and Economic Development Centres, Finnvera and Finpro was set up in May 2005 to promote client-oriented company development and growth.

The proposals by the coordination team for the promotion of rural entrepreneurship were finalised in 2006. They are to be put into practice with the implementation of the EU co-financed programmes during the period 2007–2013, and the support systems managed by the Employment and Economic Development Centres will be harmonised and people will no longer find themselves caught between two or more systems. The district enterprise services will also extend their coverage.

Fairer taxation systems have made life easier for intergenerational businesses with the reform of the Finnish Inheritance and Gift Tax Act. The reform of the corporation and capital tax system took effect from the start of 2005. Corporation and capital tax rates were cut and capital gains tax on shares and dividends was eased in certain cases. State capital tax was abolished as from the beginning of 2006.

The Finnish Companies Act, Bookkeeping Act and procurement legislation were all reformed and the drafting of legislation took account of the impact of this on business.

3. Employment Policy Programme

The aim of the Employment Policy Programme has been to make structural reforms which are vital for boosting employment and for future labour needs. The measures have been divided into four sub-projects:

- 1) Reforming the service structure of public employment services
- 2) Activating labour market aid

3) Active labour policy measures and competence development

4) Prolonging careers

Labour Service Centres form hubs of services provided by the Finnish Labour Administration, the municipalities and Kela (Social Insurance Institution of Finland) for the hard to employ. Thirty-nine such centres have been set up and their services cover 170 municipalities. At the same time the way the employment offices deliver services has been reformed nationwide with the aim of making it easier to acquire a skilled workforce and prevent long-term unemployment. Job Search Centres have been established in 35 large and medium-sized employment offices and there is better use of electronic services.

The conditions and funding of labour market aid were reformed from the start of 2006 to motivate employers, especially the municipalities (local authorities). There has been investment in the Educational Social Guarantee for Young People, with, for example, an increase in the number of those in apprenticeship training schemes and with the reform in the system of application for tertiary education.

The Employment Programme entails the coordination of national forecasts for vocational training and university and college studies. The Ministry of Education's 'Koulutustarjonta 2012' ('Providing Education 2012'), due out immediately, had the task of making a proposal for targets for the provision of education and training in 2012 by sector and discipline in the form of an Education and Research Development Programme. At present the Board of Education is involved in a development project for forecasting methods and developing templates for making estimates. It will be ready by the end of 2007.

The Employment Programme has also comprised projects to increase training geared to employment with the development of training models and information, advisory and guidance services. The aim has been to extend careers with changes to the employment pension payments, incapacity pension premiums, unemployment security and sickness allowance systems. Development programmes have been implemented to improve working conditions, and improved employment legislation and making people more knowledgeable about working life have served the same purpose.

4. Information Society Policy Programme

The aim of the Information Society Policy Programme has been to increase competitiveness, productivity and social and regional equality with the use of information and communications technology. The Programme contains 150 separate measures, of which the most crucial ones are the National Broadband Strategy, reform of the public administration information management model and structures, the implementation of information system

solutions at national level and the drafting of the Third National Information Society Strategy for the period 2007–2015.

In public administration there is a gradual move away from separate projects to solutions at regional and national level. In spring 2005 a state IT management unit was established in the Ministry of Finance. Compatible systems enable the development of eGovernment and on-line transactions, given support with the development of electronic ID systems.

The number of broadband subscriber lines has grown faster than the timetable for targets in place, largely because of the commercial competition. The regions and municipalities have drawn up and realised plans to extend connections to areas where connections are not determined by the market. The information society has been promoted through investment in research and development. The information society skills of teaching staff have improved in the areas of education, employment, research and product development.

5. Citizen Participation Policy Programme

The aims of the Citizen Participation Policy Programme were divided into four groups of targets: education for active citizenship, civic activity and civil society, interaction between citizens and Government and representative democracy.

The Programme has served to support research into citizenship education, strengthen teachers' citizenship education and add the subject to the school curriculum. The Programme has also collated opinions on the state of civil society, its importance and areas for improvement.

To further interaction between citizens and the Government, measures for hearing the views of the public and NGOs have been improved. Examples of these are the 'Kuule kansalaista' ('Listen to the People') project, a guide for civil servants, and projects for developing on-line opportunities for citizens to express their views. A permanent forum for citizens and Government is to be created with the establishment of the Civil Society Policy Advisory Committee.

6. European Union

The Government's aim has been to promote its ability to take decisions within the European Union by increasing qualified majority decision-making and strengthening interinstitutional co-operation. Finland ratified the new Constitution in December 2007. Finland has also shown its support for the EU's enlargement process.

There has been closer co-operation with the EU countries in the Baltic region. Development of Europe's Northern Dimension re-

sulted in its reorganisation as a common policy for the EU, Russia, Norway and Iceland. Special areas addressed were public welfare, health, environmental protection and improved goods traffic throughout the entire Baltic region.

In December 2005 the European Council decided the Union's financial framework for 2007–2013. Finland succeeded in its aim to channel money into special problems in remote and sparsely populated areas and rural development needs. The Lisbon Strategy, aimed at strengthening EU competitiveness, focussed more on growth and employment. In autumn 2005 the Member States drew up their Lisbon National Reform Programmes and reported back on their progress in autumn 2006. Finland has shown support for the further development of the internal market and the removal of obstacles to competition.

In energy policy the key themes have been viability of the internal market, energy efficiency and a greater share of renewable energy sources. A Green Paper out in the spring of 2006 was the start of the development of a common energy policy for the European Union. Crucial to preparatory matters on transport in the EU was the mid-term review of the White Paper on the European Transport Policy. Logistics has become one of the factors with significant impact on the Union's competitiveness and sustainable development.

Finland is one of three Member States which has achieved its EU target of allocating at least 3% of GNP for research and development.

The EU Sustainable Development Strategy was reviewed in 2006 and at the same time there was more interaction between it and the National Strategy. The legislation on chemicals was completely overhauled in 2006 and the work of the European Chemicals Agency starts in Finland in 2007.

The issues that came up during the Finnish Presidency in the second half of 2006 included enlargement, energy policy, strengthening competitiveness, combating climate change, immigration, the Middle East and EU-Russia co-operation.

7. Economic, employment and taxation policy

The main aim of the Government's economic policy during its term of office has been to increase employment by 100,000 and improve the balance of the public sector economy. Policy action has included lessening the employment tax burden, more money for research and development, a reform of corporation tax, the measures implemented under the Entrepreneurship and Employment Policy Programmes (see Annex 4.2 and 4.3), the State Productivity Programme and the realisation of the Municipal and Service Structure Project.

To promote a sustainable finance policy, the Government introduced a revised framework procedure, in which around ¾ of the appropriations in the state budget were designed for a binding framework procedure for the entire electoral term. Measures under the Government Programme have been implemented within these frameworks. In its framework decision of March 2006 the Government opted for further measures to enhance the productivity of state administration. These will result in a reduction of 8% in the number of staff employed by the state by the year 2011. Each administrative sector has produced a productivity plan.

8. Education and science

Improvements have been made to the impact and quality of vocational training by, for example, introducing vocational skills examinations, continuing the On-the-job Learning Support Programme and increasing apprenticeship training. The vocational adult education system has been reformed. In 2006 a project began in the development of vocational training to organise vocational training courses on an adequately sound structural and economic basis in regions and for training in different sectors.

The Act amending the Finnish Universities Act entered into force in 2005. The amendment gave greater precision to the 'third mission' of universities, i.e. to interact with society and promote the societal impact of scientific work. The regional development role of universities and colleges has been reinforced in the performance guidance.

The vocational college examinations system was developed with the introduction of vocational and higher vocational exams.

Science policy highlighted the importance of the internationalisation of research, the development of researcher training and careers, and greater interplay between science and society. Several surveys have been conducted for the structural development of the Finnish research system and colleges and in April 2005 a Government Resolution on the Structural Development of the Public Research System was issued. There has been progress with the vocational colleges' amalgamation projects.

The Science and Technology Policy Council of Finland headed the drafting of number of strategies to develop centres of expertise and the national infrastructure. The implementation of the strategies adopted by the Council in June 2006 has started. The working group appointed by the Prime Minister's Office drew up a comprehensive plan on the reform of state sectoral research in 2006. According to the plan, the management and control of sectoral research is to be organised at Government level based on the Government Programme and decisions taken on sectoral research.

The internationalisation of research has been one of the Government's priorities in its science policy and research career paths have been developed through a variety of measures.

The universities' budgets have increased on an annual basis in line with the Higher Education Development Act. An increase of 199 million euros was made to operational appropriations in the period 2003–2007, of which 66 million euros was allocated for financing research.

9. Regional policy

Regional development has been implemented on the basis of the Government report to Parliament on regional policy in 2004. The key priorities have been greater regional competitiveness, a guarantee of the service structure across the country, and the development of a balanced regional structure. Different ministries drew up their own regional development strategies in line with the policies. The Finnish Regional Councils reviewed their Regional Programmes in 2006. The amendment to the Finnish Regional Development Act in 2006 gave greater weight to the impact of the Regional Programme Implementation Plan on the preparation of the state budget.

The aims in the talks on the EU's regional and structural policy for the period 2007–2013 have been achieved both in terms of financing solutions and with regard to eastern and northern Finland. The National Structural Funds Strategy has been drafted for the period 2007–2013.

The Regional Centre Programme was implemented in the period 2001–2006 in 34 urban districts and one 'network' district. The Government has decided to nominate these areas for the new Regional Centre Programme for 2007–2010.

Under the Centre of Excellence Programme resources have been allocated to exploiting expertise and regional development work. In the period 2003–2006 the Programme was implemented in 22 Centres of Expertise. The aim, in preparations for the new programming period 2007–2013, has been to link Centres of Expertise and national innovation policy more closely. At the end of 2006 the Government approved 13 skills clusters for the new Programme, with the start-up of 21 Centres of Expertise in those areas.

The Government has extended the implementation of the Regionalisation Programme to take effect in February. The target set in 2005 for the 4,000–8,000 state jobs outside the Helsinki area by 2015 is being met.

10. Environmental policy

The Kyoto Protocol to the United Nations Framework Convention on Climate Change took effect in February 2005. The Gov-

ernment has worked actively to ensure that a process begins within the context of international co-operation to manage action to restrict greenhouse gas emissions beyond 2012. During the Finnish EU Presidency a separate Declaration on Climate Change was passed at the ASEM Summit.

The Government adopted the New Energy and Climate Strategy 2005, and a report on this was presented to Parliament (see 3.2.3 and 3.4.3, and Annex 2.10).

In order to cut emissions that cause eutrophication, the implementation of Finland's Programme for the Protection of the Baltic Sea and the Baltic Sea and Inland Waters Action Plan has continued. In November 2006 the Government endorsed the programme Guidelines for Water Protection to 2015.

The Programme to Promote Sustainable Consumption and Production drawn up in the period 2005–2006 in Finland is one of the first in the world. The purpose is for the eco-effectiveness of production to rise throughout the entire production chain and for eco-effectiveness to be the world's leading project of its kind. In 2006 the Government also adopted the new National Sustainable Development Strategy.

In December 2006 the Government adopted the Finnish Strategy on the Protection and Sustainable Use of Biodiversity for the period 2006–2016. The strategy is to be implemented by utilising a broad programme of measures. The implementation of the Forest Biodiversity Programme for Southern Finland (METSO) has progressed in line with the Government Resolution (see 3.3.4 and Annex 2). Progress has also been made in nature tourism and the management of nature conservation areas.

11. Industry and energy policy

Measures under industrial policy have largely been implemented as part of the Entrepreneurship and Employment Policy Programmes. Measures have been outlined under education and science policy (covered earlier) to develop the innovation environment. Increased resources for research and development have been targeted at the following areas: support for the start-up of companies based on ability to grow, expertise and innovation, the activation of R&D in companies, the more effective commercialisation of research institutes, internationalisation and greater regional competitiveness. The work of Tekes has been expanded to promote innovation and the role of VTT (Technical Research Centre of Finland) as a producer of innovation policy has been reinforced.

The technology services supplied by the Employment and Economic Development Centres have been strengthened with the setting up of the Technology Development Departments. On the other hand, the boundaries between the departments have been reduced through the development of the private client

service model. Forty-eight company service points have started up in various districts.

The implementation of the Industrial Policy Programme for the Wood Products Sector 2004–2010 and the Programme to Promote Wood Building 2004–2010 started in 2005.

In the New Energy and Climate Strategy targets for energy and climate policy were laid down. Finland will fulfil its greenhouse gas restriction obligations in the Kyoto commitment period 2008–2012 and is likely to implement the national plan for the allocation of emission rights for 2008–2012 after the amendment to the Finnish Emissions Trading Act has entered into force and the plan has won the approval of the European Commission. The National Strategy for Adaptation to Climate Change was drafted in 2005 as part of the overall strategy. The strategy also included the launch of a five-year research programme on adaptation to climate change.

There have been changes to energy taxation and the introduction of low-emission heating methods in detached houses was stepped up with the appearance of the new energy efficient renovation grant in spring 2006. It has been decided gradually to introduce an obligation to use biofuels for vehicles as from 2008. To boost security of supply, legislative proposals have been prepared to abolish energy tax on peat and the aid granted to it via taxation.

12. Rural businesses

The National Forest Programme 2010 continued to be implemented as described in this report.

The National Rural Development Strategy for the period 2007–2013 was drawn up with reference to the European Community Strategic Guidelines. The Rural Development Programme based on the strategy was approved by the Commission. The aims of the Programme include improved competitiveness in agriculture, improving the state of the environment, the diversification of rural business, and the promotion of the Leader methodology.

The Government has adopted a cross-sectoral Special Rural Policy Programme for 2007–2010, which is aimed at strengthening the viability of rural areas and exploiting urban-rural interaction. The special programme is based on the Rural Policy Programme 2005–2008 produced by the Rural Policy Committee.

13. Transport and communications policy

A proposal by the ministerial working group on infrastructure has led to a decision to launch 19 large infrastructure projects and to undertake seven theme projects in connection with the Government's framework decisions. The programme of investment also took account of the implementation of the Programme for the Development of Sea Lanes and Inland Waterways. To improve international traffic, the Finnish Logistics Action Plan was produced in 2005. The efficiency and productivity of the maintenance of traffic routes have been improved by, for example, procurement models developing customer-oriented approaches and the long-term programming of route maintenance.

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