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Forest Resources in Finland, Iceland, Norway, Sweden and the United Kingdom – a Background Note

Andreas Schuck

European Forest Institute

1 Introductory remarks

In the course of the project 'Enhancing Local Activity and Values from forest land through community-led strategic planning (ELAV)' a seminar was held at Koli National Park in Finland during 23th & 24th of March 2006. Background information was given on the forest resources in the five countries participating in the project, namely Finland, Iceland, Norway, Sweden and the United Kingdom. In this paper the five countries will be referred to as ELAV countries. A few indicators have been selected to describe the forest resources including forest area, growing stock, ownership, production and trade, employment in the forest sector and forest protection.

2 More than 40% of the European land area is covered by forest

Forests play an important role in Europe in terms of production of timber, non-wood forest products, provision of clean water, soil stabilization, protection against natural disasters, a place for recreation, sequestration of carbon, and other economic, social and environmental functions.

Forests cover about 1 billion ha in Europe (including the whole of the Russian Federation) which is more than 40% of its land area (Figure 1). Thus forests represent a major element of the natural landscape (MCPFE 2003, UNECE/FAO 2000). The share of forest cover varies greatly among European countries: in Iceland it is about 0.5%, while in Finland and Sweden nearly 70% are covered by forest. Finland and Sweden together comprise about 80% of the forest area in the ELAV countries (approx. 50 million ha). Between 1990 and 2005 the forest area in Europe has increased by 12 million hectares (or about 0.08% per year) while in many other regions of the world there has been a decrease in forest cover (FAO, 2005). With respect to the ELAV countries Iceland and the United Kingdom have shown a respectable increase in forest area between 1990 and 2005 (from 25,000 ha to 46000 ha and 2,61 to 2,85 million ha respectively) most of which results from afforestation activities.

3 Highest volume on one hectare is in Central Europe

When one looks at the actual growing stock in Europe the distribution does not necessarily correspond with that of the distribution of forest area. The highest growing stock besides in the Russian Federation is found in Sweden, Germany and France. The highest volume in m^3/ha occurs in the forests of Switzerland (368 m^3/ha) and Austria (300 m^3/ha) while the European average is at about 107 m^3/ha (FAO 2006). In the ELAV countries the growing stock ranges between 65m^3/ha in Iceland and 120m^3/ha in the United Kingdom.

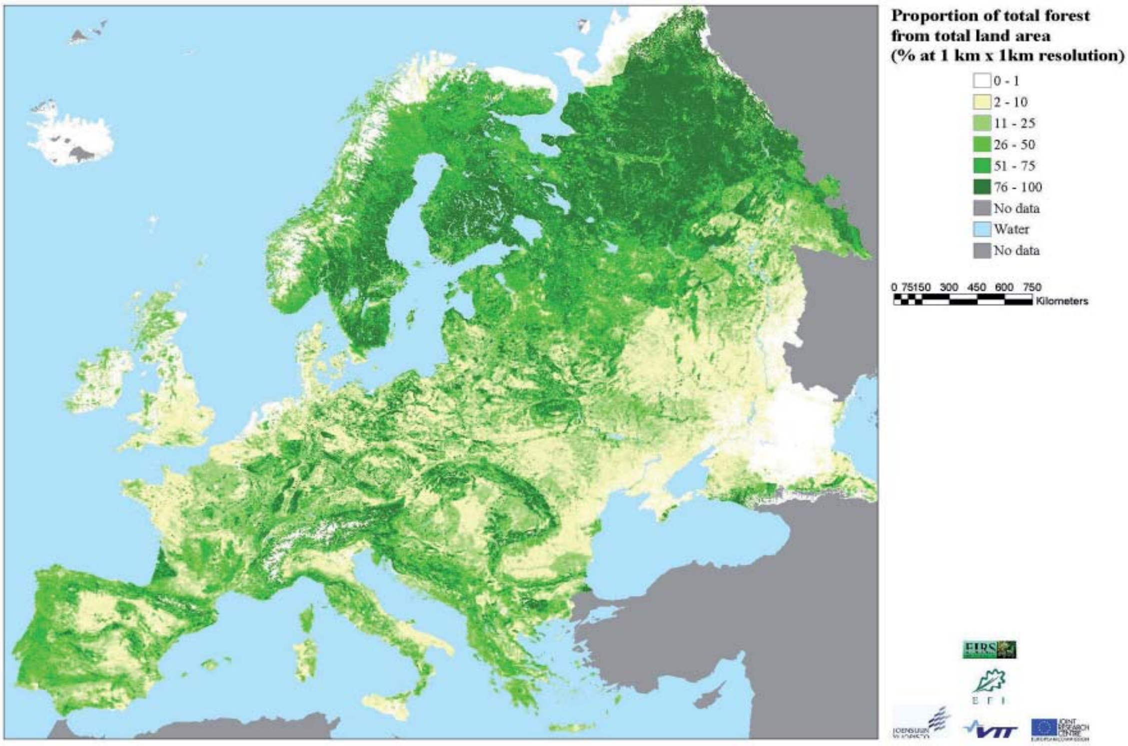

Figure 1. The distribution of forests in Europe (Päivinen et al. 2001, Schuck et al. 2003)

4 Forests are mainly in the hands of private owners

When excluding the Russian Federation, Belarus and Ukraine, where forests are still solely owned by the state, nearly 60% are in the hands of private forest owners. The number of forest owners in Europe is estimated at some 16 million according to estimates of the Confederation of European Forest Owners (http://www.cepf-eu.org/); and that number can be expected to further increase due to ongoing restitution processes in Eastern European countries. The average size of public holdings (excluding the Russian Federation) is on average about 1 300 ha. Private holdings have an average size of 13 ha. However, there is considerable variation among countries in the average size of holdings. The vast majority of private owners have forests with less than 3 ha in extent (MCPFE 2003).

When looking at the ownership structure in the ELAV countries about half of Iceland's forest is privately owned while in the United Kingdom and Finland it is around two thirds, 64% and 68% respectively (Figure 2). Swedish and Norwegian forest are mainly privately owned (80 and 86%).

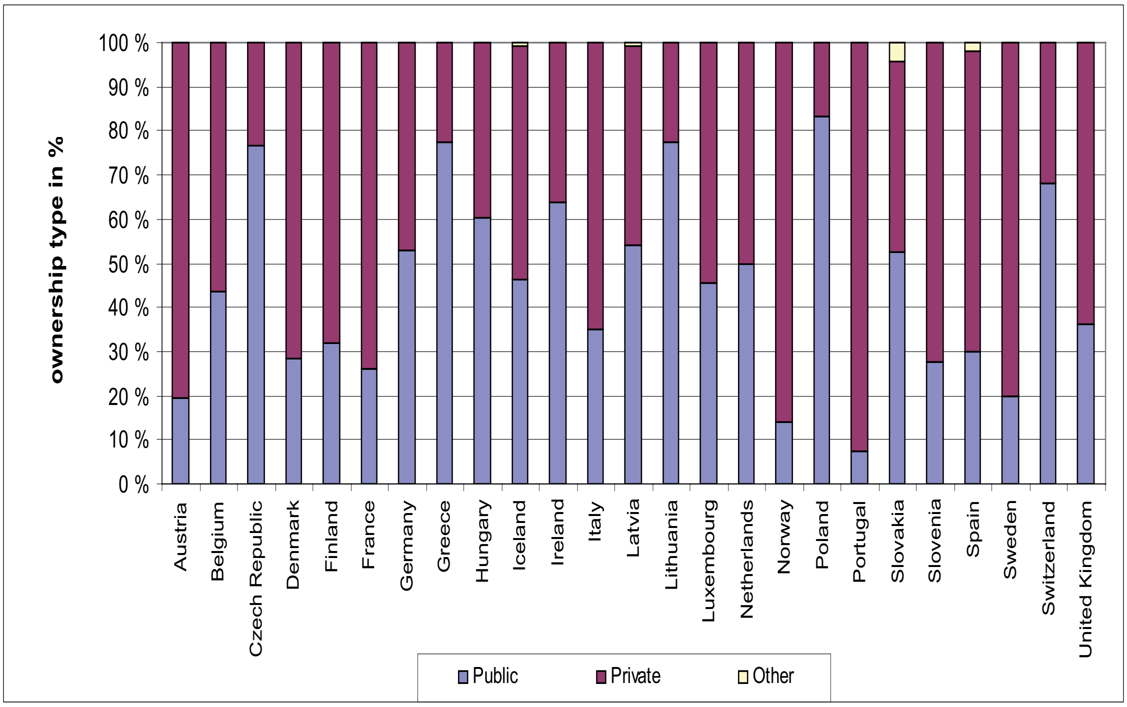

Figure 2. Ownership of forests in selected European countries (MCPFE 2003).

5 Wood production in Europe above 600 million m^3

Some 640 million m^3 of roundwood has been removed from European forests in 2004 thus giving Europe a share of about 19% of the world's total (FAOSTAT 2006). The Russian Federation is the country with the highest timber production in Europe (182 million m^3) which has been steadily increasing since 1999 after low production rates during the 1990s. When looking at the production of the ELAV countries in comparison to the EU & EFTA countries they have produced about 35% or 138 million m^3 of its roundwood in 2004 (FAOSTAT 2006) (Figure 3). The major roundwood suppliers are Sweden and Finland (67 and 54 million m^3 respectively).

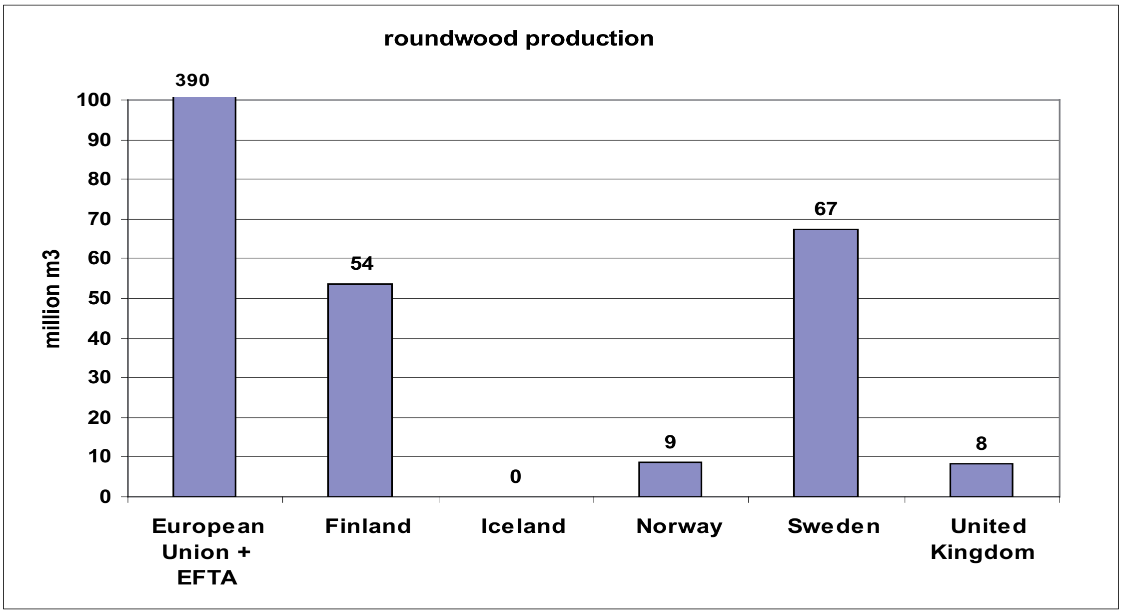

Figure 3. Roundwood production in the EU & EFTA countries in comparison to ELAV countries.

6 Imports, exports and trading partners

The ELAV countries account for about 20% (12 billion US$) of all forest products imports of the EU & EFTA (reference year 2003; FAOSTAT 2006). They export about 35% of all EU & EFTA products representing about 31 billion US$. When looking at the four main product groups it can be seen that the emphasis lies strongly on export activities (Table 1). This is to be expected as Finland and Sweden are main producers of forest products in particular paper & paperboard. They exported paper & paperboard at a value of about 18 billion US$ in 2003. The United Kingdom is a net importer of all forest products in particular of sawnwood and paper & paperboard.

Table 1. Import and export % of main product groups from/to EU & EFTA by ELAV countries (reference year 2003; based on FAOSTAT 2006).

Product group	*Import (%)*	*Export (%)*
sawnwood	24	44
wood-based panels	23	11
wood pulp	13	62
paper & paperboard	1	40

The main trading partners of the ELAV countries are Sweden, Finland, Russia and Germany (Table 2). Russia for example mainly exports large quantities of roundwood to Finland which represent nearly half of all its exports to Europe. A general observation is that trade does to a great extent occur between neighboring countries which is quite obvious due to transports costs and more localized markets.

Table 2. Main trading partners of ELAV countries (most important trading partners are underlined) (FAOSTAT 2006).

Year 2003	**Export to**		**Import from**	
	Countries	**Value in mill. US$; (total Europe)**	**Countries**	**Value in mill. US$; (total Europe)**
FIN	BEL, FRA, *GER,* ITA, NED, ESP, SWE, UK	5717 (7795)	*RUS*	546 (1228)
ISL	*AUT,* SWE	1.9 (2.4)	FIN, LAT, NOR, *SWE*	40 (67)
NOR	GER, SWE, *UK*	882 (1459)	FIN, *SWE*	510 (811)
SWE	DEN, FRA, *GER,* ITA, NED, UK	5165 (8226)	*FIN,* GER, NED	917 (1760)
UK	BEL, FRA, *GER,* *IRE,* NED	1217 (1730)	BEL, FIN, FRA, *GER,* NED, NOR, SWE	4941 (6750)

7 Employment in the forestry sector is decreasing

Employment provided by the forestry sector is an important contribution to the socio-economic benefits generated by forests, especially for sustainable rural development. An adequate workforce in terms of numbers and qualifications is a critical component to sustainable forest management. In Europe's forest sector total employment in full-time equivalents (FTE) is 1.36 million persons. Turkey has the highest number of employees (472 408 FTE), followed by the Russian Federation (239 300 FTE), Poland (64 400 FTE) and Germany (61 520 FTE) (UNECE/FAO 2002, MCPFE 2003). Overall, however, the employment in the forest sector has been decreasing in many European countries over the last decade mainly due to rapid increases in mechanization. Between 1990 and 2000 the workforce in Europe has been declining in the sectors 'forestry' (ISIC/NACE 02.0) by 22%, 'wood industries' (ISIC/NACE 21) by 16% and 'pulp and paper' (ISIC/NACE 22) by 8%. The ELAV countries show a similar trend. With a decrease of 35% of the workforce in forestry and 19% in 'pulp and paper' between 1990 and 2000 the ELAV countries lie above the European trend not so however in 'wood industries' (-3%). Employment in the sector 'forestry' per 1000 ha of forest area has the highest concentration of employees in South-eastern and Eastern European countries. Examples are Turkey (47 FTE/1000 ha), the Czech Republic (13 FTE/1000 ha) and the Slovak Republic (12 FTE/1000 ha). Norway and Sweden have less than one FTE employed per 1000 ha of forest area. Finland employs 1 FTE/1000 ha of forest. The low employment in relation to the forest area in northern European countries reflects the high level of mechanization and good working conditions. The figures, however, are certainly influenced by the large area of forests and a low population density.

8 Protected forests

In this final chapter the status of forests and other wooded land which are under protection are presented. Guidelines for data collection had been elaborated for the Ministerial Conference on the Protection in Europe (MCPFE) 2003. They distinguish the classes:

Class 1: Main management objective 'biodiversity':
- *1.1*: no active intervention
- *1.2*: minimum intervention
- *1.3*: conservation through active management

Class 2: Main management objective 'protection of landscapes & scenic natural elements'
Class 3 addresses protective forest. This class is not included in this overview.

As can be seen from Figure 4 most of the protected forests belong to class 2. Only in the alpine and adjacent regions of Central Europe and Northern Europe forest areas are found which show no intervention or minimum intervention. The amount of protected forest from Class 1 and 2 varies from more than 60% of the forest and other wooded land area in Germany to no more than 1% in Ireland. The percentages in the ELAV countries range between 4% in Norway and 29% in the United Kingdom. When taking into account only the more strict protection classes 1.1 and 1.2 Liechtenstein (27%), Sweden (9%) and Finland (6%) show the highest share of protection. The United Kingdom does not have any forest in the two strict protection classes, Iceland has 4% while Norway constitutes 4%.

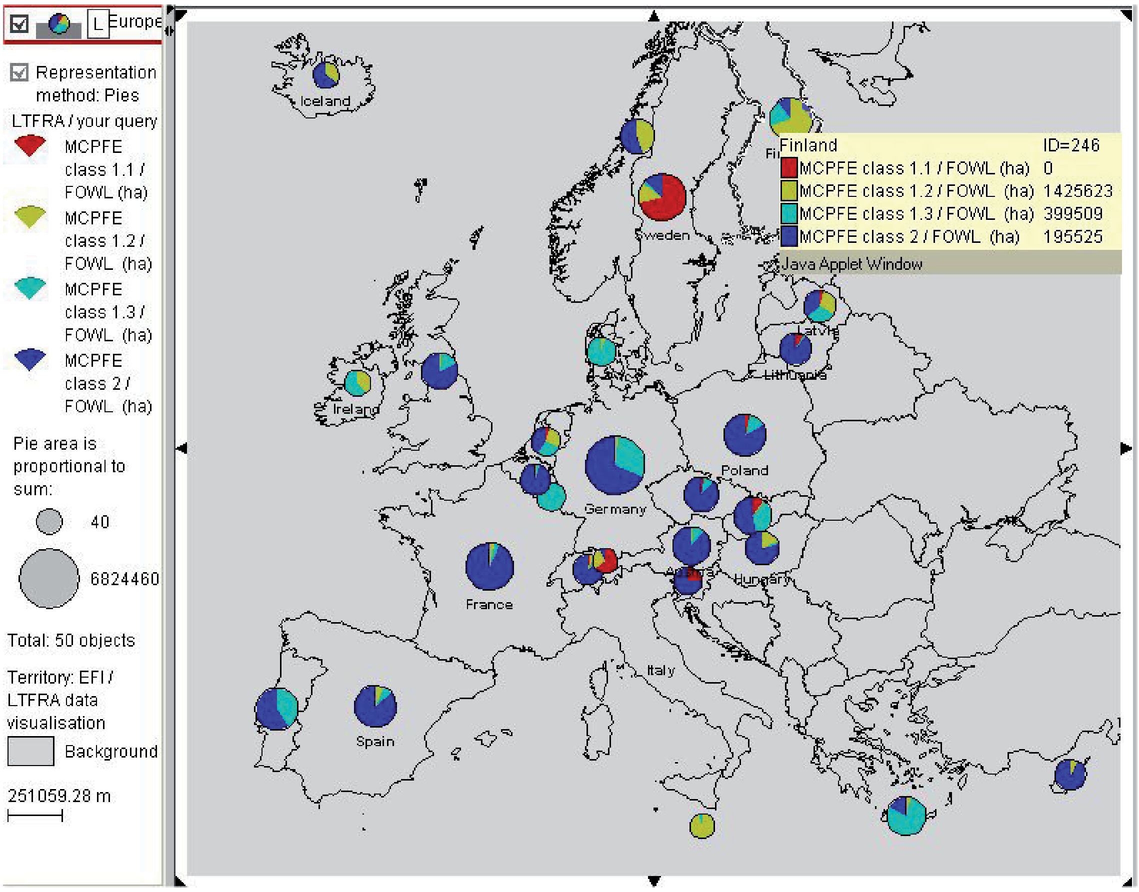

Figure 4. Protected forests in the EU and EFTA countries (MCPFE 2003). No data available for Italy and Estonia.

9 Final remark

This paper as stated in the introductory remarks was produced for the ELAV seminar to give a general overview of forest resources, forest products production and trade as well as socio-economic and biodiversity related information on Europe with special emphasis on Finland, Iceland, Norway, Sweden and the United Kingdom. Additional information or more detail on the indicators described above can be found in the publications and databases of the FAO, UNECE/FAO and the MCPFE. A number of main sources of information on forest resource s in Europe are listed in the references below.

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