

Forest Certification in Estonia

Rein Ahas Hando Hain** Peep Mardiste****

ABSTRACT

This case study provides an overview of the process and effects of forest certification in Estonia. The discussion regarding forest certification was initiated in Estonia in the mid-1990s as environmental NGOs started to highlight the potential benefits of certification. The issue was discussed further in the working groups of the National Forest Development Program, bringing it to the attention of a broader range of institutions, officials and stakeholders. Since 1998 the work on forest certification has been more organized, due to the official establishment of the National Working Group on Forest Certification. Shortly after the establishment of the Working Group, it was decided that the national principles on sustainable forestry would be developed according to Forestry Stewardship Council (FSC) principles and criteria. The main areas of dispute in the Working Group were the requirement for forest management plans, the acceptability of forest drainage systems, and the question of whether chemicals, pesticides and exotic species can be used on forestland. A draft version of the national standard was approved in 2000. Since then, the National Working Group has also served as the official Estonian FSC Working Group. A major breakthrough was the certification of all state-owned forests in 2002, covering roughly one million ha, 20 percent of Estonia's total area and 40 percent of its forested land. Certification of state-owned forests has been an important factor contributing to gradual changes in Estonian forestry practices. Various interviewed stakeholders assert that its main effects have been the increased participation of stakeholders, increased social security and safety of forest workers, and forest management that is "closer to nature." Certification of such a significant forest area has also enabled chain-of-custody certification to begin.

* Rein Ahas, Ph.D.
Professor, Institute of
Geography, University of Tartu
Vanemuise st 46, Tartu,
51014, Estonia
rein.ahas@ut.ee

** Hando Hain, M.Sc.
Ph.D. student, Institute of
Geography, University of Tartu
Vanemuise st 46, Tartu,
51014, Estonia
handoh@ut.ee

*** Peep Mardiste, M.Sc.
Ph.D. student, Institute of
Geography, University of Tartu
Vanemuise st 46, Tartu,
51014, Estonia
peep@ut.ee

INTRODUCTION

This case study describes forest certification in Estonia. Its main focus is the Forest Stewardship Council's (FSC) forest certification program, under which the entire Estonian state forest system, comprising almost one million hectares, has been certified. This program has significantly impacted many aspects of Estonian forestry. The other certification scheme discussed is the Programme for the Endorsement of Forest Certification schemes (PEFC – formerly the Pan-European Forest Certification Programme). Since none of Estonia's forests or industries has yet been certified under the PEFC program, this study discusses only the emergence of the PEFC Working Group and its developments so far.

Since Estonia regained independence in 1991, FSC certification has proven to be one of the most successful measures for regulating the country's state forestry sector. Following the introduction of Estonia's neo-liberal policies, forestry regulation has been minimal (Estonian Forest Code 1998) and it is estimated that up to 50 percent of the volume of felled timber has been harvested illegally (Ahas *et al.* 2002; Hain 2003). At the same time, FSC certification of state forests, which cover approximately 40 percent of the country's forested area, has improved the quality and transparency of forest management (Eesti Keskkonnaühenduste Koda 2002). According to NGO claims and public opinion, FSC certification has helped to overcome the problem of poor forestry regulation that developed in the post-Soviet years. While the exact nature and results of FSC certification are arguable, certification in general has most certainly promoted environmental protection, worker safety, and sound sustainable resource management (Lillemets 2004). Furthermore, FSC certification has also helped to initiate discussions among interested groups within the forestry sector and has given rise to many new ideas.

For example, both the Estonian sustainable forestry standard and the draft national FSC standard have introduced a new concept – the “spring truce” – previously unknown in FSC criteria. It bans forest work during animals' breeding season (spring and early summer) to allow them to pup or nest undisturbed. This principle was brought to the Working Group by the Estonian Ornithological Society, the Estonian member of BirdLife International.

FSC has also brought up the need to reintroduce ethical issues such as what might be considered “good common practice” – ideas that had largely been forgotten by foresters during Estonia's years of wild capitalism. Indeed, the approach of the National Working Group on Forest Certification, which was based on FSC principles, was to re-establish an emphasis on forestry ethics, while the State Forest Management Center (RMK) was charged with implementing these ideas and other forest management practices through implementation of FSC certification.

This case study summarizes the development and impact of forest certification in Estonia. For this purpose, materials since 1995 have been analyzed and records of certification meetings studied. Questionnaires regarding the effects of forest certification were sent to 28 individuals who represent different stakeholder groups and institutions interested in forest certification. Eleven completed questionnaires were received.

To gather additional information and fill informational gaps, interviews were carried out with thirteen additional members of the Estonian forest policy community and other stakeholder representatives.¹

Based on the feedback and information gathered, generalizations were made and conclusions drawn. Where information presented by different parties varied significantly, both opinions have been presented. Specific personal references have been provided where appropriate; statements without references reflect the opinion of a majority of our informants. In a very few cases, the person interviewed wished to remain anonymous. In those cases, the only reference listed is “interview.”

BACKGROUND FACTORS

Historical Context

The Estonian political landscape has been rather one-sided since the country regained independence in 1991, as the electorate has consistently returned parties to power from the right of the political spectrum that have continually promoted neo-liberal policies. The government has helped to establish legislation regarding the political system, the economy, and private property. Unfortunately, it has paid little attention to environmental and natural resource issues (Tallinna Pedagoogikaülikool 2003). Political parties most active in the Ministry of Environment, which have been responsible for development of the forestry sector, have been criticized for not providing the kind of public leadership that would most effectively care for the forest and environment (Kultuur ja Elu 2004).

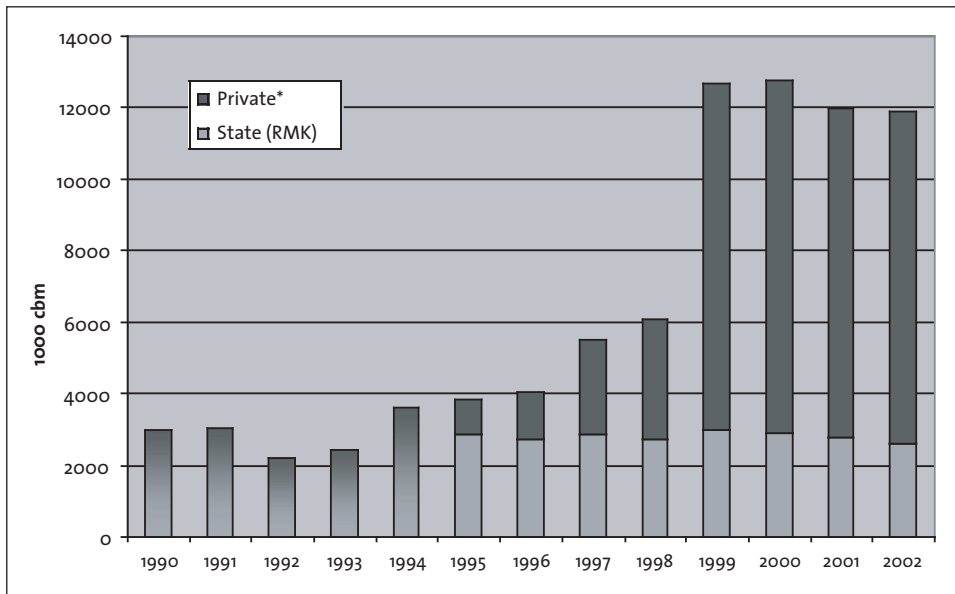
The parties that tend to be involved in today’s governing political party coalition are Rahvaliid (People’s Union), representing the rural population, and Reformierakond (Reform Party), representing big businesses. Since gaining power in the mid 1990s, Rahvaliid and Reformierakond have advocated for liberal forest regulations that would support economic growth during hard times in rural areas. This political stance has led to a reduction in regulation and generated major forestry problems, such as unplanned forest management, widespread illegal forestry, and unsustainable over-logging (Ahas 2003). After the 2003 elections, the Rahvaliid party reversed course and declared a need to limit forest use and destruction (Ministry of Environment 2003). Observers in NGOs maintain, however, that the steps taken by Rahvaliid have been insufficient to achieve proper use of forest resources (EGM 2004).

A number of fundamental changes occurred in the forestry sector after Estonia regained independence in 1991. Most significantly, forestlands that had been privately owned during the former Estonian Republic (1918-1940) were returned to descendants of their historical owners. With the establishment and increase of private forest property came the swift growth of the timber industry. Furthermore, the Soviet structure for forestry administration was no longer functional; the government and state forestry department could no longer control forestry effectively (Ahas 2003). Harvesting rates (Figure 1), illegal logging, and timber-related tax fraud increased precipitously during the mid 1990s (Hain 2003). The need for fundamental changes

¹ These included: Jaanus Aun, board member of the Private Forest Centre; Peter Feilberg, CEO of NEPCon Estonia; Kristjan Tõnisson, managing director of NEPCon Estonia; Ulvar Kaubi, marketing manager of State Forest Management Center (RMK); Tanel Renser, environmental manager of the State Forest Management Center (RMK); Rainer Kuuba, coordinator of the Estonian FSC working group; Olev Lillemets, environmental manager of State Forest Management Center (RMK); Ahto Oja, project coordinator of the Estonian Institute of Sustainable Development (SEIT); Kalle Pöld, director of Private Forest Center and representative of the Estonian PEFC working group; Andres Talijärv, managing director of the Estonian Forest Industries Association (EMTL); Toomas Trapido, director of Estonian Fund for Nature; representatives of three timber industry companies.

in forestry administration and policy became ever more apparent. To solve these problems, the Ministry of Environment, with support from the Finnish government, launched a Forestry Development Programme (FDP) in 1995. This effort resulted in the parliamentary approval of the Estonian National Forest Policy on June 11, 1997 (FDP 1997; Kallas 2002). The FDP recognizes the importance of sustainable forest management and also sets development of forest certification as one of Estonia's goals. This was one of the three initial factors that helped FSC-based certification emerge in Estonia (Tonisson 2000).

Figure 1 Annual felling volumes in Estonia 1990-2002



* From 1999 to 2002 the felling volumes are given according to NFI data. The division of felling volume between the state and the private sector is not known before 1995.

Sources: Yearbook 2001; Yearbook 2002; EFSC 2001; EFSC 2003; RMK 2002; RMK 2003

Approval of the Forest Policy led to the 1998 Forest Act, which fundamentally restructured public forestry administration (Kallas 2002) and ultimately enabled forest certification to become a reality in Estonia in its present form. The Forest Act authorized establishment of the State Forest Management Center (RMK) in 1999, a government-owned corporation which went on to obtain an FSC forest management certificate for all of the Estonian state forests. Both policy documents clearly state that the policy-making functions regarding state forests should be separated from their practical management (FDP 1997; Forest Act 1998), resulting in the establishment of RMK.

Understanding RMK's functions and status is important because this organization is Estonia's only certified forest manager, aside from one private owner. RMK was the first (and so far only) government-owned profit-making organization in Estonia. Thus, RMK took on practical forest management and profit-making, while the

forestry department within the Ministry of Environment retained control over policy-making, supervision, and law enforcement. Since 1998 the Ministry of Environment's forestry department has had limited capacity (with fewer than 10 employees) and limited power. Its support for forest certification had more direct and indirect impact during the period of 1998-2000, when intensive changes in the political and institutional context of forestry were led by the Ministry of Environment, and support for achieving forest certification was directly written into the Forest Development Plan.

Forest certification's effects on the main problems in forestry (lack of planning, over harvesting, illegal forestry) cover only the 40 percent of Estonia's forests owned by the state and covered with a FSC certificate. In private forests, the effects of certification are virtually non-existent, since private owners oriented to short-term profits and often acting illegally (Hain 2003) are not interested in certification (ELF 2002). This situation is bolstered by the fact that as a practical matter an unlimited market exists for non-certified timber in Europe.

Regardless of the various forestry problems, it is the impression of auditors that the problems have resulted not from bad foresters, but rather from the fact that the Estonian forestry sector has traditionally been quite conservative, and accordingly, has not been able to adapt and react effectively to all of the post-Soviet changes (personal interviews). These changes have been further magnified by the market pressures, political preferences, and relatively large financial resources involved in forestry.

Forestry Problems

According to the 2002 National Forest Inventory, the total forestland in Estonia is approximately 2.2 million hectares, or 50.5 percent of the country's area. Of this, roughly 3 percent is continually regenerating or being felled and is not actually covered with forest (EFSC 2003). The state owns approximately 40 percent of total forestland and manages it via the aforementioned State Forest Management Organization (RMK). Another 36 percent of the forests are registered private forests. The remaining forests are not yet privatized or taken through restitution by descendents of historical owners, but will likely be privatized in the near future (Table 1). There are no official statistics about further divisions of private forest ownership, i.e. between industrial companies and small landowners. However, it is estimated that approximately 30-40 percent of private forests belong to forestry companies (Valgepea 2004). The total population of Estonia is less than 1.4 million people (SOE 2004).

Table 1 Forest area (ha) and ownership structure

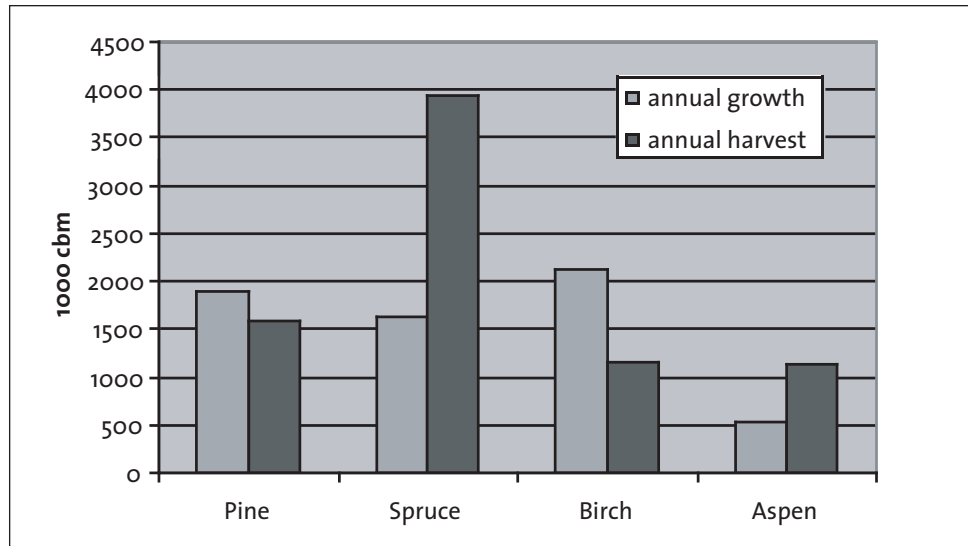
	Total forest area	Commercial forest	Forests with additional management restrictions
State (RMK)	834,200	603,800	230,400
Private	795,570	1,109,900	261,700
Other*	576,030		
Total	2,205,800	1,713,700	492,100

*The category represents forestlands that are planned to be restituted or privatized in near future. RMK is presently legally representing the owner of such areas.

Sources: EFSC 2003, Land Board 2004

A significant characteristic of private forest property in Estonia is the extreme fragmentation of forest ownership. Forests smaller than 10 ha compose 43 percent of the forest area registered by the Land Board and 80 percent of its total listings (Forest Yearbook 2001). The fact that average forest size is very small makes relative certification cost (price per hectare) high for private forest owners (Feilberg 2004). Furthermore, continuous forest management is not feasible on such small areas. These are some of the main reasons that forest certification has not been achieved by most private forest owners (Feilberg 2004).

Due to the country's current liberal policy, no system regulates the total amount of felling on private forestlands or its division among owners (Hain 2003). Therefore all forest owners can manage their forests freely, according to their own best judgment. This has led to unprecedented harvesting levels in private forests, where harvest levels greatly exceed annual growth for some species (Figure 2). The Forest Act, as decreed by the Ministry of Environment, is the legal framework that regulates harvesting. It provides minimum allowed thresholds for harvesting, based on stand features such as basal diameter and canopy cover. The liberal political framework is another underlying reason for the lack of certification in private forests, since fulfilling certification requirements would severely limit owners' ability to carry out felling beyond sustainable limits (Feilberg 2004). Most forest owners and businesses seek quick profits and short-term benefits to alleviate the high unemployment rates and extensive social problems in rural areas (Ahas 1999).

Figure 2 Estimated annual growth and harvest rate for selected species

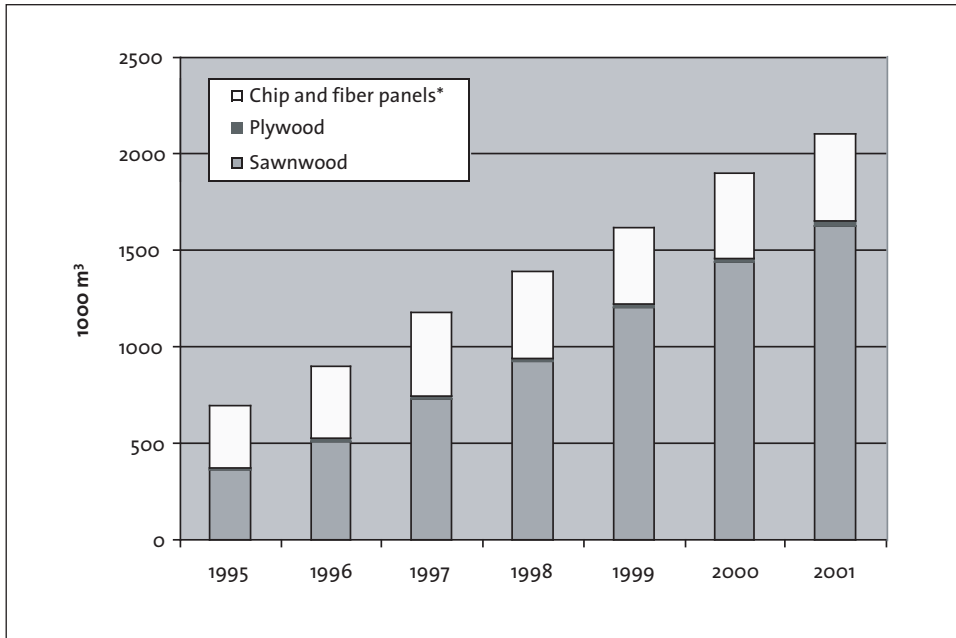
Source: EFSC 2003

Markets

One of the key players in the Estonian timber industry is the Estonian Forest Industries Association (EMTL), a very strong voice in national discussions of forestry and forest policy. EMTL's main interest is to promote the economic growth of the timber industry sector, and it therefore lobbies strongly for higher felling volumes. It has vigorously opposed some restrictions enforced in state forests resulting from FSC certification, such as establishing the "spring truce" (EMTL 2003). EMTL has also strongly influenced the development of forest certification in Estonia, especially regarding PEFC. Although EMTL's attitude towards forest certification is generally positive, it has most directly supported the PEFC program. EMTL has provided direct financial support to the PEFC Working Group and its representatives have been actively involved in developing PEFC standards (Talijärvi 2004).

The timber industry is the second largest industry sector in Estonia after food production, and accounted for 14 percent of the manufacturing sector's total production in 2002 (SOE 2002). Along with increased harvesting and a growing industry in general, production volumes have risen steadily for all major timber product groups (Figure 2).

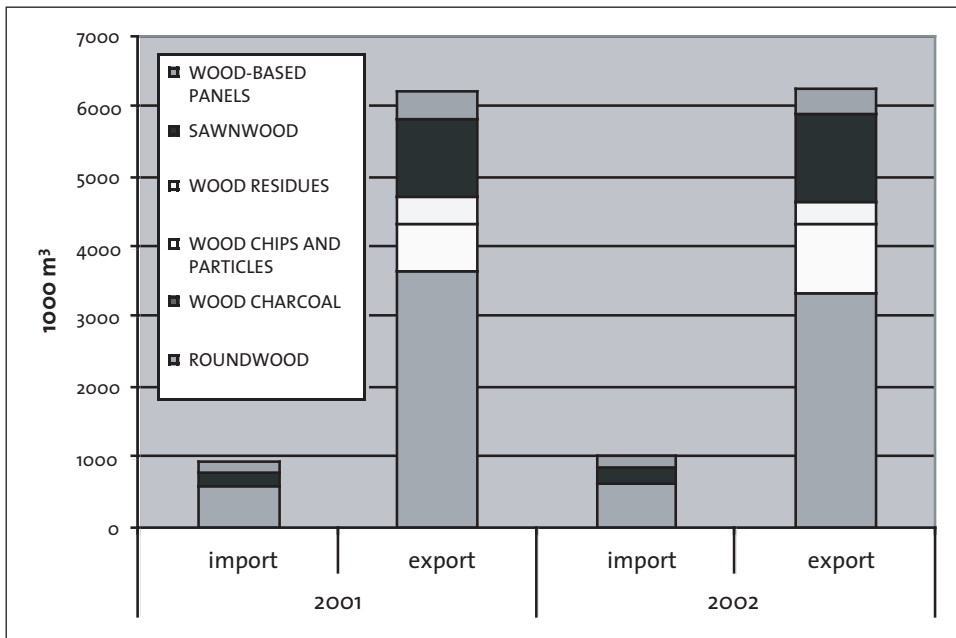
Figure 3 Manufacturing of principal wood products in 1995-2001



* Fiber products have been recalculated from m² to m³ by using average thickness of 15 mm per fiber plate.

Source: SOE database 2004

Figure 4 Structure of import and export of major timber product groups in 2001 and 2002



Source: SOE database 2004

Comparing Figures 3 and 4 provides a general picture of domestic timber processing and imports and exports. Although the share of domestic processing of roundwood has increased, the majority of exports still consists of roundwood. Roundwood exports consist almost entirely of pulpwood (Valgepea 2004), which is exported mainly to Scandinavian countries (SOE database 2004). The rapid increases in felling volumes during the past decade have been matched by the increased production capacity of local sawmills. However, since a major part of local raw material is exported as pulpwood, the sawmills do not have a sufficient domestic roundwood supply and are forced to import substantial quantities of logs from Russia (Table 2). This has led to increased roundwood prices and a deficiency of raw material for sawmills and secondary processors. These developments have negatively affected chain of custody certification, since it is difficult to assure consistent supplies of certified inputs (Feilberg 2004).

A major pulp mill opened in Kunda in 2006, which will increase logging and import of aspen wood as well as export of pulp. The pulp mill, Estonian Cell AS, was granted an FSC certificate in June 2006. It plans to use Ca 400,000 m³ of Aspen annually, which is more than the total cost of Aspen in the Estonian State Forests. During the pulp mill's initial environmental impact assessment, national NGOs were able to force its developer to require that the aspen's origins be verified, and to ensure it had been legally cut. The company also agreed to ensure, within 3 years of opening the mill, that at least 50 percent of its annual inputs originated in FSC-certified forests (ELF 2003). These agreements will likely increase private forest owners motivation to certify their forests.

Table 2 Main Estonian trade partners for timber and timber products in 2002 (million EUR)

Country	Import	Export
Finland	18.3	99.2
Germany	8.0	62.0
Russia	57.4	7.0
Sweden	4.4	89.4
UK	0.2	71.4

Source: SOE database 2004

THE EMERGENCE OF FOREST CERTIFICATION

Initial Support

Our research indicates that the emergence and development of forest certification in Estonia were supported by the following key actors and events:

- active support of international environmental NGOs and their partners in Estonia;
- desire for alternative policies by the creators of national forest policy (Tonisson 2000);
- dissatisfaction amongst national environmental NGOs with the prevailing liberal forest policy, and their consequent search for non-state market mechanisms;
- ongoing certification discussions in neighboring countries (Oja 2001);
- emerging markets and demand for FSC products.

The idea for forest certification emerged in 1995 as the Estonian Green Movement–Friends of the Earth (ERL) began studying and promoting FSC certification (Oja 2002). NGOs began meeting to discuss certification issues in 1996 and 1997. ERL cooperated closely with the Taiga Rescue Network (TRN – a transnational network of organizations committed to protecting boreal forests), which had been active in FSC certification issues when TRN’s coordinator Karin Lindahl was on the FSC Board. From 1997 on, another major environmental NGO, the Estonian Fund for Nature (ELF), became involved as well as other NGOs. In 1998, ERL became the first Estonian member of FSC International, widening its contacts and credibility. Several years later, ELF and Ahto Oja, as an individual member, also joined the FSC.

One of the indirect causes of NGO support for the FSC was the Ministry of Environment’s stiff, undemocratic approach to forest policy development (Kultuur ja Elu 2004). NGOs became especially uncomfortable with the state’s approach during the creation of the Estonian Forestry Development Program in 1996–1998 (Kallas 2002; FDP 1997). Their critique of the government’s forest policies was very visible in the media in 1996–7, and made the Ministry of Environment less eager to cooperate with them. Their isolation from the Ministry caused NGOs to concentrate on developing independent regulations, including FSC regulations. International donors and environmental NGOs supported their efforts with both ideas and funds; indeed, Estonia’s environmental NGOs have been funded primarily by foreign donors throughout the past dozen years. Only in 2004 did the Estonian government approve financing for an NGO-led project promoting FSC certification.

What emerged from the controversial Estonian Forestry Development Program in 1997 was a neo-liberal forest policy that emphasized production over scrutiny of forest practices, and ultimately, facilitated illegal forestry operations and related tax fraud. Specifically, the neo-liberal policy eliminated mandatory requirements that Forest Management Plans be developed and licenses obtained before logging

operations could occur. This led to a situation some have described as “uncontrolled forestry” and a dramatic increase in felling. For five years, forest logging has exceeded annual growth (Ahas 1999; Ahas 2003; Ahas and Hain 2003). Some officials have sought alternatives to these policies, however. The Forestry Department at the Ministry of Environment started studying certification issues in 1998. In 1998 and 1999 the State Forestry Department financed studies of certification principles and analyses of the draft Estonian Sustainable Forestry Standard. In the following years both direct and indirect support grew among active officials who were looking for new policies and alternatives to traditional forest policy.

As compared to state officials and NGOs, the support for certification from forest workers and social groups was almost unnoticeable. Trade unions and similar organizations are relatively weak and unorganized in Estonia, and employers still have wide latitude to fire their workers. In RMK, for instance, many people have been laid off since 1998 due to large-scale consolidations. In several cases, foresters or workers lost their jobs after making critical comments about the organization (Kuuba 2004). This may be one reason that trade organizations do not use FSC certification to the fullest extent.

National Working Group on Forest Certification

The Estonian National Working Group on Forest Certification (NWGFC) was formed in November 1998 by thirty interested organizations and individuals whose goal was to create an Estonian sustainable forestry standard (Tonisson 2000). Mr. Ahto Oja, an environmentalist with a forestry background from the Stockholm Environment Institute Tallinn branch (SEI-T), was appointed as coordinator. NGOs played the primary role in initial bringing together interested parties and exchanging information. It was mainly members of the Estonian Green Movement who suggested Mr. Ahto Oja as a coordinator, and no objections were raised by any parties. In the spring of 1999, the Working Group decided to take FSC Principles and Criteria as the basis for their work. Many forestry experts took part in the discussions. A representative of the Danish FSC Working Group, Peter Feilberg, served as a foreign consultant, assessing the certification standard. In December 1999, the group approved a draft sustainable forestry standard; in the following year it discussed, field tested, and modified that standard.

The Estonian NWGFC was originally oriented to the FSC standard and system because of environmental NGOs’ active participation and the momentum behind the FSC globally. In 2000, the idea of Pan-European Forest Certification (PEFC – now renamed the Programme for the Endorsement of Forest Certification) was introduced to NWGFC by some Working Group members and Finnish consultants. The Working Group spent much of that year debating the principles and strategies of FSC versus those of PEFC. These discussions remained fairly hypothetical, since no one in the Working Group had practical experience with FSC or PEFC. Eventually these discussions led to a split between members. FSC was supported primarily by NGOs and RMK, and PEFC by industries and forest scientists. NWGFC therefore divided into two separate groups, as described below.

Despite this division, NWGFC's sustainable forestry standard was approved in December 2000 by 23 organizations and individuals.² At this time, it was also decided that, while the NWGFC standard would remain as a basis, both FSC and PEFC could be developed further. A discussion ensued about whether FSC or PEFC standards could be lower than NWGFC's, but it was not fruitful.

² Estonian text: www.agenda21.ee/metsandus/esms12122000.html

Estonian FSC Working Group

Although the NWGFC was established in 1998 primarily to develop FSC certification in Estonia, the specific FSC Working Group was not launched until October 2000 by 11 groups and individuals (Table 3).

Table 3 Representatives in the Estonian FSC Working Group and their division by chambers. Five individuals joined after the group's first meeting on 10/27/00.

October 2000	February 2004
<i>Environmental chamber</i>	<i>Environmental chamber</i>
Estonian Green Movement-FoE – NGO* / R. Ahas/	Estonian Green Movement-FoE – NGO*/R. Ahas/
State Forest Management Centre – Gov. /O. Lillemets/	Estonian Fond For Nature – NGO*/R. Kuuba/
Mr. Rainer Kuuba	Mr. Ahto Oja*
<i>Economic Chamber</i>	<i>Economic Chamber</i>
Estonian Fond For Nature – NGO* / T. Trapido/	Baltic Connexions – Company /K. Vene
Baltic Connexions – Company /K. Vene/	Sirje – Company /
Mr. Lembit Maamets	Estonian Forest Survey Centre – Company /L. Maamets/
Mr. I. Tust	NEPCon#
Ms. E. Rebane	Metsaekspert – Company / P. Põntson/
	Mr Peep Põntson
	Mr Lembit Laks
	Mr. Peeter Muiste
	Mr Lembit Maamets
<i>Social Chamber</i>	<i>Social Chamber</i>
Mr Ahto Oja*	Tartu Student Nature Protection Circle – NGO /K. Podmoshenski/
Mr. Kristjan Tõnisson*	Võro Selts VKKF – NGO /
Mr. Toomas Krevald	Mr. Veiko Belials
	Mr. Indrek Tust
	Mrs. Heli Kiigemägi

* Member of FSC

NEPCon holds FSC membership as a Danish non-profit organisation (the headquarters of NEPCon is located in Denmark).

In September 2001 FSC International presented provisional conditions for accepting the National Working Group. Because of other pressing issues in forestry (new regulation, illegal logging) the progress of the Working Group in 2001-2003 was very slow, and the provisional conditions were not met. Lack of motivation and effective coordination also hindered the activities of the Working Group and slowed overall progress. In 2004 the activity level of the Working Group rose and the conditions were met. In May 2004 official confirmation was received from FSC headquarters that the Estonian National Working group had been approved and contract formulation had been initiated. As of May 2004 the FSC Working Group has 17 members in 3 chambers (Table 3).

The FSC's greatest success has been attained in certifying forests. The State Forest Management Centre (RMK), which manages 40 percent of all Estonian forest (20 percent of Estonia's land), initiated development of an internal environmental management system in 1998. By 2000 the system was ready for independent verification according to the ISO 14001 requirements. In response to suggestions by Estonia's largest NGOs, in particular the Estonian Fund for Nature, RMK began to consider the possibility of certifying the forest management system concurrently with the EMS certification under ISO. Both the director general of RMK at that time, Andres Onemar, and the governing board, were supportive of the idea of joint FSC-ISO 14001 certification, since it was perceived by RMK that an FSC certificate would garner additional recognition of the good level of forest management of Estonian State forests among the general public, trade partners, and forest managers in neighboring countries (Lillemets 2004). When a joint proposal was received from the certification organizations BVQI (ISO) and SmartWood (FSC), it was unanimously decided to go for both certificates (Lillemets 2004). At that time, no PEFC Working Group was active in Estonia, and no discussion of the merits of PEFC versus FSC was taking place (Lillemets 2004). FSC certification was carried out by NEPCon,³ which is the regional representative of the FSC accredited certification body SmartWood in Eastern Europe, Russia and Scandinavia. In 2000 NEPCon certified the first forest in Baltic countries: about 300 ha of private forest. Certification of all Estonian state forests followed shortly in 2002 (Tonisson 2004). These were the initial steps in the development of FSC certification in the Baltic region.

Development of chain of custody certification, however, has been slow in Estonia. The reasons for this should probably be sought in the somewhat conservative business mentality of Estonian companies as well as lack of certified raw material for secondary processors. As of mid-2004, a total of two FSC forestry certificates and ten active FSC chain of custody certificates (CoC) had been issued in Estonia. Two CoC certificates were voluntarily stopped in 2004 due to a shortage of certified raw material (see explanation for this below in "Current Status of the Certified Marketplace"), and two CoC certificates were suspended due to violations of CoC requirements (Tonisson 2004). For comparison, in Latvia 69 CoC certificates had been issued as of March 2004 (FSC 2004).

³ NEPCon (Nature, Ecology and People Consult) is a non-profit company that has been actively involved in FSC certification in the Baltics since 1999, when a contract was made with a FSC-accredited certifier, SmartWood (Feilberg 2004).

Estonian PEFC Working Group

The concept and idea of PEFC certification was initially introduced in Estonia in 1999 by a subgroup of representatives from forest industries, Finnish consultants, and the Forest Owners Association. Although since then the timber industry has developed an interest in PEFC certification (Talijärv 2004), development of a national scheme has been hindered by lack of financial resources as well as lack of cooperation among the stakeholders. In 2002 a discussion about acquiring PEFC certification for the state forests was initiated by selected individuals; however, the idea has not yet been commonly accepted as a goal for RMK (Kaubi 2004). Those interested in developing the PEFC have contended that it is important to have different certification schemes present in the NWGFC and in the marketplace. Beginning in 2002, the PEFC Working Group has also attracted members of the Estonian Forest Industries Association and forestry engineers from the Estonian Agricultural University. As of April 2004 the Estonian PEFC Working Group had nearly finished elaborating the documentation for the local Estonian PEFC certification scheme, including the forest management standard, chain of custody standard, and a few additional documents. The scheme, however, has not yet been approved by the PEFC Council; thus certification according to PEFC rules is not yet possible in Estonia (Pöld 2004). Activities of the Estonian PEFC initiative and Working Group have been financially supported by multiple sources, including Finnish timber companies, the Estonian Forest Industries Association (EMTL), the Estonian Ministry of Agriculture, and other voluntary supporters (Pöld 2004).

Institutional Design

Both the National Working Group on Forest Certification (NWGFC) and the FSC Working Group have been structured according to the FSC scheme, with environmental, economic and social chambers. Decision-making has mainly consisted of consensus in the NWGFC, while in a few cases a majority vote has been used. Although most problematic issues, such as protection versus management, or the spring truce, were discussed earnestly in the NWGFC, consensus was eventually reached (Oja and Aitsam 2001).

The Estonian FSC Working Group had 17 members as of February 2004, and in its discussions a typical FSC system of environmental, economic and social chamber is used. For voting, each chamber has equal share of voting power and similar rules used by the international FSC are applied to ensure balance between economic, social and environmental interests. As explained above, voting has only been used in rare cases when consensus has not been achieved. Voting by chambers has been used in cases of elections, approval of reports, and a few organizational issues. The Estonian PEFC Working Group consists of 18 members. Votes are decided by a simple majority, although for the majority of decisions consensus is achieved.

Discussion within certification working groups has enhanced the development of democratic procedures and practices in Estonia. Most importantly, procedures for joint action have been established. Formerly, different stakeholders had confronted

each other instead of having open discussions. There has been strong push for cooperation in order to achieve joint goals and reach consensus in certification working groups. It has taken lot of effort to establish respectful procedures for meaningful communication. Through the discussions, the need to balance different interests has become evident to all participants.

Standards

In the first stage of the certification discussions the FSC Principles and Criteria were taken as a basis by the Estonian National Working Group on Forest Certification (NWGFC) standard (Oja 2001). NWGFC developed the standard over several years with very intensive discussions. The main discussion themes were: whether to require forest management plans, the concept of spring truce, usage or renovation of forest drainage systems (primarily the draining of wetlands), introduced exotic species, fertilizers and pesticides/herbicides (Oja 2002; Tonisson 2000). The question of non-clear-cut forestry was raised by some environmental NGOs, suggesting that non-clearcut methods introduce less disturbance in most forest ecosystems and are more ecologically appropriate. However, the discussions were not successful because even “green foresters” did not want to discuss it. Estonian forestry is quite committed to clear-cut management (personal comment of R. Ahas).

Once the NWGFC standard was approved in December 2000, the FSC Working Group started to develop its own national FSC standard, while the PEFC Working Group was not active for several years. The FSC standard followed the FSC principles exactly. Work was much easier because very intensive and important discussions had already been held in the NWGFC. Discussions were also more congenial because part of the opposition did not join the FSC Working Group.

However, the FSC certification that began in 1999 utilized SmartWood’s so-called Interim Standard for Estonia. Since the Estonian National Standard had not been approved by FSC International, NEPCon was required by SmartWood to review the standard according to FSC general principles and criteria. The standard used for certification was formulated based on the NWGFC standard with few modifications and additional points to make the standard more easily auditable (Feilberg 2004). In 2003, FSC challenged usage of the Estonian interim standard during an accreditation audit in Estonia, since the principles were not following exactly FSC’s principles (instead of Principle 3, which was considered not applicable, the principle about forest regeneration was used). Due to FSC requirements, the SmartWood Interim Forest Management Standards for the Baltic Region has been used in Estonia since then, which are based largely on the previous Estonian interim standard as well as on SW generic guidelines (Feilberg 2004). For FSC chain of custody certification mainly the SmartWood standard is used (based on FSC CoC requirements) since the majority of CoC certifications have been carried out by the SmartWood representative NEPCon (Feilberg 2004). For establishing the PEFC standard in Estonia, a national sustainable forestry standard was abandoned while the international documentation of PEFC was used instead.

Forestry Problems

The National Working Group on Forest Certification (NWGFC) and FSC Working Group have been attempting to address the key problems of forestry in Estonia – over harvesting, illegal logging, unplanned forestry, and weak habitat protection. As noted above, many blame neo-liberal government forestry policies developed during the period of economic transition for causing these problems. To be sure, there is little doubt that political, legal and economic reforms, as well as ownership and land reform issues that began after Estonia regained its independence in 1991, have directly influenced the current state of Estonian forests. Likewise, certification has been viewed by critics of neo-liberal policies, including environmental NGOs (ENGOs) and selected landholders, as a solution to ameliorating forest deterioration. Environmental NGOs also wanted to ensure better oversight and transparency in the forestry sector. For producers, the need to acquire chain of custody certification has been driven primarily by specific requirements of foreign customers for the purchase of certified products (Tonisson 2004). Thus for CoC customers certification has been a means for securing continuous sales of certain products to European markets with high environmental consumer awareness (the UK and other Western European countries).

Much attention was devoted to the requirements of the forest management plan in the certification standard. Such an approach was consistent with the need to supplement too-lenient state legislation and to fight illegal forestry. At the same time an effort was made to increase the importance of nature conservation in forest management plans and to stop extensive drainage of wet forest ecosystems in the forests (Oja 2001).

Special attention was given to the “spring truce” concept. The fundamental idea is to achieve seasonal harmonization of forest management. This approach was orchestrated by environmental NGOs, led by the Estonian Ornithological Society. The aim of the restriction is to protect forest fauna during the nesting period and forest soils during the fragile spring season (Hain 2002; RMK 2003). The spring truce is a strategy that emerged as a counterbalance to industrial (Scandinavian) style forestry that has become increasingly common in Estonia. In traditional and farming societies, people do not have the time or need to carry out logging during the spring, as the soil is fragile, wood is soft, and it is time for agricultural work. Environmental NGOs proposed a halt in forest management operations for the period of April to July. This proposal met with strong resistance among forest companies and was the primary topic of discussion within the NWGFC for many months.

The spring truce concept was successfully applied by the RMK during its FSC certification process (Lillemets 2004). The first draft of the RMK springtime felling strategy was prepared in November 2001, barely a month before the FSC certification audit was conducted. The main aim of the strategy was to drastically reduce (almost halt) felling activities in state forests during the sensitive spring season. A revised strategy was prepared in February 2002 and discussed publicly with stakeholders (Hain 2002). A test implementation of the strategy took place in the same year, and in 2003 the strategy was officially implemented for the first time. Although by 2004

the practice had been accepted among state forest institutions and most stakeholders, it still provokes negative feedback from timber industries (EMTL 2003). Estonian ENGOs supported the application of the spring truce strategy in RMK by sending out several press releases (Eesti Keskkonnauhenduste Koda 2002) and by nominating RMK as a recipient of the most environment-friendly activity award in 2003.

Another topic that caused active discussions in the NWGFC was the drainage of forests. During the Soviet period an extensive drainage network had been established, and almost all damp or wet forest areas had been affected. To preserve the ecologically valuable wetlands and wet forest site types, environmentalists took the position that too much drainage had already been done in Estonian forests, and that no drainage systems should be allowed to be established in certified forests. Many older foresters, who had been involved in the work of drainage system development during the Soviet era, could not accommodate themselves to this approach and opposed it (Oja 2001), claiming that drainage is an essential part of forest management. In addition, people working on drainage feared losing their jobs and were an active lobby group. Many scientists and foresters were also very positive about the effects of forest drainage. Because establishing large forest drainage systems had been a national priority in the years of Soviet control, many specialists had a longstanding involvement and commitment to it (Schults 2004). On the other hand, many experts say that because of Estonia's low relief, long growing cycles, and highly active beaver population constantly damming and choking drainage systems, forest drainage can be only carried out if subsidized (Marvet 2004). Ecologists and environmentalist also argue that amelioration is affecting basic forest ecology and biodiversity, and is bad for ecosystems in natural water bodies (Kuuba 2004; Laanetu 2004).

The main and most extensive problem of Estonian forestry — illegal logging and illegal forestry (Hain and Ahas 2005; Ahas and Hain 2003; Ahas *et al.* 2002) — has remained largely unsolved by certification. Illegal activities mainly take place in private forests (Hain 2003), where certification has not been adopted. According to interviews with private forest owners, the implementation of certification would require too many changes and would place large restrictions on the existing latitude of forest management decisions (ELF 2002). For example, preparation of management plans and payment of taxes are elementary prerequisites for forest certification; yet in private forests illegal activities and tax deception are widespread and management plans are used only in very rare cases (Hain and Ahas 2005). Illegal forestry (except for small-scale forest theft and theft intermediate storage areas) is not considered a problem in the FSC-certified state forest (RMK), since the organization has control over resources and certification has made the forest management practices and decisions transparent.

Table 4 presents the main discussion topics regarding certification as reported by Tonisson (2000). The interest of forest producers in being informed grew out of the rise in demand for FSC products in the marketplace. It was also their interest to unite against environmental NGO initiatives for regulating the forestry sector and logging. There were no major conflicts in the process of drafting the PEFC standard in Estonia, as all participating parties shared similar interests.

Table 4 Main discussion topics in Estonian NWGFC (after Tonisson 2000 and Kuuba 2004).

Issue	Arguments Pro	Arguments Con
Spring truce – ban logging in breeding season (spring-summer)	<ul style="list-style-type: none"> – no disturbance to nesting birds; – protection of forest soil and undergrowth, mosses, berries; – avoidance of severe damage to roots and mycorrhiza; – reduced erosion; – reduced spread of disease and pests; – higher quality of timber. 	<ul style="list-style-type: none"> – difficult for forest industry as it represents significant share of total felling; – reduced income of forest owners and foresters.
Ban on amelioration of wetland forests	<ul style="list-style-type: none"> – wetlands have high conservation value; – amelioration systems affect natural functioning of forest ecosystems; – amelioration systems affect ecosystems in natural water bodies; – economic effect is negative since growing cycle of trees is too long in Estonia. 	<ul style="list-style-type: none"> – many private forests are located on less productive wetlands which could be more productive after land improvement.
Limiting clear cut management	<ul style="list-style-type: none"> – ecological and sustainable management is free of clear cuts. 	<ul style="list-style-type: none"> – clear cutting is economically more beneficial; – Estonian forest unit and clear-cut site is very small.
No introduced species, herbicides, pesticides	<ul style="list-style-type: none"> – sustainable forestry has to be managed without them. 	<ul style="list-style-type: none"> – there is need for introduced species because of forestry traditions and landscaping; – pesticides and herbicides can be used to prevent huge damage.

THE REACTION TO CERTIFICATION

Forest Policy Community and Stakeholders

None of the certification schemes had direct opponents. Work on the national sustainable forestry standard was begun jointly, and this cooperation helped to ease later conflicts as teams developing FSC and PEFC certification schemes worked separately. Supporters and skeptics of FSC and PEFC certification schemes had conflicting opinions. While environmental NGOs supported the FSC and were skeptical of the PEFC, the majority of forest owners and the timber industry were skeptical of the FSC and backed the PEFC. Most of the timber industry companies that have FSC CoC certificates have pursued it due to direct requirements of customers (Feilberg 2004).

Various forest companies have tried to support both certification schemes in order to keep up with developments and remain competitive (Talijärvi 2004). Among some forest companies, however, resistance to the spring truce is still visible.

Our research for this study indicates that forestry and environmental officials and state representatives have relatively neutral or skeptical positions on certification issues today. They refer very often to additional expenditures and see no significant benefits of certification. Many local foresters and inhabitants are also critical of certification, as they consider investing in environmental protection and safety unnecessary and a waste of limited resources in forestry and rural areas. Although the basic position of RMK on certification is positive, many officials and specialists within the organization are also critical of the FSC, as it has created many new procedures and additional bureaucracy.

Forest Owners

A clear distinction can be made between private forest owners and RMK, the state forest manager. RMK, as the largest forest owner in Estonia, has well educated staff and has generally an FSC-friendly approach. In contrast, small private forest owners from the countryside are typically not interested in any type of certification or other regulations. Still a third perspective is held by an active faction of forest owners who live in cities. They often belong to a forest owners association and tend to support the PEFC, in part because financial or institutional support is promised through that system. In interviews for this study, the landowners and representatives of forest owners associations said that their organizations support cooperation and certification of small owners with funds from the state budget, or possibly international funds. This is an important tool to keep owners interested in cooperation and certification. The FSC system, in contrast, has no organizational support from forest owner organizations today. Big companies owning forests are generally skeptical towards certification. Their current management standard involves high harvest rates and no management plans, making certification difficult. (Hain and Ahas 2004).

Current Status of Forestland Certification

Two FSC forest management certificates had been issued in Estonia as of April 2004. No forests have been certified according to PEFC. The entire Estonian State Forest Management Centre (RMK) has an FSC certificate, which covers in total 1,063,000 ha of forestlands (less than 900,000 ha is actually covered with forests). The second certificate has been issued to a private forest owner, Mr. Lembit Laks, and covers 517 ha.

Apart from problems with illegal forestry discussed above, certification among private forest owners is severely inhibited due to the very small size of many forest properties (80 percent below 10 ha: Forest Yearbook 2002) and the low level of organization and cooperation among private forest owners. Cooperation for group certification is particularly lacking because of the low interest among forest owners from rural areas.

Estonian forest companies and intermediaries held 10 chain-of-custody certificates as of April 2004 (see next section). Four of these were suspended during 2004 due to economic problems or violations of FSC and/or certifiers' rules (Tonisson 2004).

Current Status of the Certified Marketplace

Since there are no domestic PEFC certified sources available in Estonia, the following section considers almost exclusively FSC-certified material (Table 5).

Table 5 Valid FSC certificates in Estonia as of 1 of February 2004 and approximate sales of certified timber in 2003.

Type of company	Number of FSC certificates	Certified annual sales in m ³
Forest manager	2	2,700,000
Primary manufacturer	7	900*
Secondary manufacturer	4	700*
Brokers	1	-

Sources: SW database 2004; FSC 2004; Kaubi 2004; interviews.

*Since most of the companies did not want to provide specific data, the figures are rough estimates based on interviews.

Although the state forest sells almost 3 million cubic meters of certified round wood each year, the Estonian certified marketplace still has a serious shortage of certified roundwood, which in turn hinders the availability of certified lumber and the progress of certification among secondary processors (Feilberg 2004; interviews). Since the timber industry's production capacity is very high in Estonia due to rapid expansion in the late 1990s based on over harvesting (Ahas 2003), there is currently a general lack of round wood on the market. RMK sells certified roundwood through open tenders and smaller certified processing companies are not able to compete with high roundwood prices offered by large corporations (interviews).

RMK, as the primary supplier of FSC-certified raw material, sold approximately 2.7 million cubic meters of FSC-certified timber in 2003, and similar volumes have been maintained since. Additionally small quantities of certified timber are sold each year by a certified private forest owner managing 500 ha of forests. The share of roundwood sold directly by RMK for export is insignificant (below 500 cubic meters in 2003 (Kaubi 2004)), but the real volume of certified roundwood that is exported is much higher. Exact figures are not known since timber is bought by intermediate local companies or local representatives of foreign companies and resold further from the intermediate storage yards. The authors estimate, however, that the share of exported roundwood could be close to half of the total certified sales. Today both RMK and producers with FSC chain of custody certification face a situation in which a large market for FSC products has not been found, and only in rare cases is there willingness to pay extra for certified products. In such conditions it is difficult to

stand firm about need for certification, and other companies see little reason to follow (Tonisson 2004). As our interviews revealed, it is also the case that Estonian timber industries have more demand for non-certified wood products than they can meet; therefore the number of companies willing to spend time and money for certification is limited.

Unfortunately less than 0.1 percent of certified roundwood is processed as certified by primary and secondary manufacturers. The main types of certified products presently manufactured in Estonia are “do it yourself” garden products and small quantities of lumber (Feilberg 2004). (More background information on this situation and the main bottlenecks is provided in the section on Roadblocks and Challenges.)

EFFECTS OF FOREST CERTIFICATION

This section focuses on the Estonian state forests, which are virtually the only certified forests in the country. It is also worth noting that because RMK's land is certified by both FSC and ISO 14001, the effects discussed here cannot be attributed solely to FSC certification. Furthermore it should be noted that forest management practices in general have changed considerably since the Soviet era. On one hand, a general transition from Soviet-era low intensity forestry to modern high intensity forestry model has occurred. On the other hand, this has resulted in increased public attention and thus increased stress on environmental considerations in state forests. In the authors' opinion it is not possible to fully distinguish the effects of forest certification from those of the post-Soviet transition period and reforms.

Power

The most important change brought to Estonia through certification is increased discussion among the various stakeholders. Discussions started in 1998 in the NWGFC involved the participation of more than 40 organizations and representatives. The group of people supporting certification has grown through the certification of the State Forest Management Centre (RMK), as more forestry officials and entrepreneurs have come on board. Our interviews revealed that the number of RMK senior staff members interested in certification issues has been growing as a result of the continuous auditing and other changes implemented in RMK largely as a result of FSC and ISO certification. Our interviews also indicate that certification has caused changes in the very thinking and attitudes of many people in the Estonian forestry sector. In general, more attention is given to environmental and social issues in discussions and decision-making throughout the sector. Nevertheless, the understanding of certification and its impacts varies considerably. Based on our interviews, we can distinguish three major groups of FSC stakeholders with clearly different understandings.

The first group consists of environmentalists, specialists in RMK, and people involved in working on the national sustainable forestry standard. This group values

the essence of certification and assesses its outcome as positive. There are still some environmentalists, however, who are skeptical about certification and its effects. The second group is made up of typical forestry entrepreneurs and many state foresters who have a skeptical attitude toward certification. This group views certification as an unnecessary additional obligation that does not result in significant benefits. Members of this group claim that certification decreases the volume of available timber and increases bureaucratic paperwork. A third, rather isolated group is private forest owners. This group doesn't have a direct link to or interest in certification.

In light of the large amount of illegal forestry and the unsustainable rate of over-logging, the reputation of Estonian forestry has typically been low both among the local population and abroad. FSC certification of almost half of the forest lands (state forests) has helped to improve the state's reputation among some local and international interest groups as a good forest manager and owner. RMK presently has broad support among environmental NGOs and the Estonian forest sector's reputation has also been improving.

According to the interview responses of various RMK officials, RMK has mostly benefited from FSC certification through its enhanced reputation, better developed management system, and new contacts. Certification made RMK's management more transparent and understandable, a process also furthered by RMK's ISO 14001 certification, which occurred at the same time. During the joint certification many management processes were changed and new ones initiated. RMK's accomplishments have been confirmed by internationally recognized certifiers. At the same time, some NGO and company representatives have noted that the information flow from RMK has become more formalized; now only certain staff members have permission to talk with the public or journalists. This has caused some to wonder whether RMK has in fact become more secretive and closed to outside parties. Many stakeholders are beginning to ask whether RMK feels the need to hide information, as the company communicates less often and more carefully.

Environmental NGOs also appear to have gained increased influence or power through certification process by virtue of gaining more opportunities to spread their message and to directly monitor activities in the forestry sector (Trapido 2004). Many ideas proposed by environmentalists (such as biodiversity trees, protected areas, spring truce, and landscape ecology in management plans) have made it into the daily practice of RMK through certification. However, NGOs are still rather weak in financial and human capacity terms and thus have been unable to fully utilize their potential during certifier audits of RMK. The third group that has received more rights and influence through certification are forestry workers, who now have more formalized means of protecting their rights and a high work safety standard required by RMK.

One important finding of our research is that worker safety and security issues are now addressed much more frequently in RMK than was the case before. This gives more rights and power to workers and contractors working with RMK, and alters the typical situation of Estonian workers, which is to work as required and not to discuss things. Still, it appears that the trade unions and local organizations did not realize the full range of their opportunities during the certification process.

Social

Certification of RMK has changed the training, security and health care of its staff. RMK was required to reorganize its measures for labor security and health care and to start monitoring their implementation. Quite strict policies were established to address concerns that were previously neglected in Estonia due to prevailing liberal policies. Nonetheless, such expenditures are still seen by most companies as an unnecessary and pointless requirement. Taking care of one's health remains a low priority in the Estonian population, where average life expectancy is just 65 years for men and 77 years for women (SOE 2003).

Many entrepreneurs and forestry officials claim that access to timber as a resource has been constrained by certification, and that felling volumes are falling as a result. They also argue that certification has increased unemployment in the countryside, first because people without special training have lost the opportunity to work for RMK and second because the spring truce has reduced production levels. On the other hand, the proportion of illegal forestry has decreased, since RMK can now cooperate only with legal entities. The fact that less timber from state owned forests can enter the illegal market means that more taxes are collected, which in turn should increase peoples' sense of social security.

Very few respondents saw positive effects of certification for local inhabitants and businesses. Local groups and individuals were generally not able to participate in certification discussions due to their physical isolation and the demands of everyday work. Serious communication problems remain between the national initiatives in Tallinn and local interests. Overall, then, there is little evidence that certification has served to empower or engage rural citizens in Estonia.

Economic

Our research shows that certification has changed activities and markets for those companies that were able to find markets for specialized products, or whose clients demanded FSC certification. Considering the number of certified companies, however, the share of such companies is very small, constituting only a few percent of the total timber industry companies in the market. Secondary processors are in very few cases also receiving better revenues and profits for certified products (interviews). Nevertheless the chain of custody certificate (CoC) creates a competitive advantage for its holders, or helps to maintain certain foreign clients who demand FSC certification (mostly in UK and other Western European countries). As a rule, however, most members of the forest sector have not witnessed any price premiums (personal interviews). Generally, forest companies have noticed that certification has slightly changed business contacts and practices, and that new spheres and topics of discussion have emerged, such as new buyers from local or/and international small furniture companies or environmentally friendly construction companies. New markets and competition opened up for certain products, such as garden and various "do-it-yourself" products sold on UK markets, for example. Stability in forestry also assists the local tourism industry and those dealing with gathering and selling forest fruits and mushrooms, as their investments are more secure.

Stakeholder meetings during the establishment of the FSC national working group showed that people involved in tourism and supplying forest berries and mushrooms are worried about decreasing forest coverage. Tourism promoters dislike big clear cuts because tourists value more natural landscapes and forests. Lack of suitable forests for picking forest berries and mushrooms is especially visible in agricultural regions with fewer forests. In such areas with fertile soils, the forest is more valuable and therefore there is pressure to use it more intensively. Tourism and catering of forest berries and mushrooms are one of the very few and seasonally variable sources of income in Estonia's poorest remote regions.

Overall, most forest companies are doubtful and somewhat worried about future markets and profits. They are prepared to invest in certification as a backup option in case the market situation changes. Some of our respondents believe that governments of certain countries, or alternatively the EU, may start to demand some sort of certification or legality verification of products imported from tropical and central and eastern European countries. However, there are various opinions and strong debate ongoing regarding whether or not such restrictions would be possible to implement within WTO rules, especially considering the General Agreement on Tariffs and Trade (GATT).

Certification entails additional production and management costs, which were highlighted by all forest officials, owners and producers contacted for this study. The exact amount of such additional expenses, however, either is not known or is proprietary information. Such costs are not easy to estimate, since they involve both direct costs as well as indirect costs of training, safety, technology, and environmental protection. Respondents highlighted increased staff costs as salaries became more linked with technical qualifications. Although not a result of certification, it should also be noted that the general price of roundwood has risen in Estonia due to a shortage of raw material, which in turn has resulted from over-capacity of Estonian saw mills and earlier over-logging. Owners of chain of custody certificates often express concerns about the requirement for separate storage facilities for FSC-certified products. Expanding storage areas is a big problem for some companies because of the shortage or high price of land.

Skeptical forest owners and companies see no direct benefit from FSC certification. Only a few products (mostly secondary products such as furniture and garden products) can be sold for a price premium (interviews). Many entrepreneurs, forest owners and officials claim that demand is strong enough in Estonia so that it is easy to sell forest products without certification. And they say that even if Europe were to close its market to non-certified products, they would still have a large demand from the Middle East, Russia and Asia. This group thinks that less timber is allowed to be felled in sustainably managed and certified forests, and that total felling volumes will start to decrease as a result, leading to lower incomes. They also claim that logging decreases in certified forests will be balanced by increased logging in other forests.

Environmental

The most direct benefits of FSC certification have been environmental. Protection of the environment has gained more importance, environmental NGOs have been able to act effectively, the reputation of certified companies has grown, and the Estonian State as a large forest owner has gained a better image. In the following paragraphs the environmental benefits that have occurred are illustrated mostly with the example of RMK.

If asked to estimate the environmental impacts of certification, most respondents stress that in companies that voluntarily did certification, the senior management became much more environmentally educated and aware. Extensive training exercises have been held, numerous manuals prepared, and educational campaigns conducted. These initiatives have in turn changed behavior in everyday forest management and resulted in more close-to-nature forest management practices (e.g., leaving more down woody debris, snags, etc., in the forests).

Logging rules and methods that were virtually absent previously have been widely implemented and companies now regularly consider environmental factors in conducting their operations. As a direct result of conditions raised by certifiers, guidelines and implementation procedures for certain activities (such as forwarding, drainage system renovation, etc.) were established or improved in order to minimize negative impacts on ecosystems and soils (Trapido 2004; Feilberg 2004). In addition to strict guidelines, the broader framework for good forest management was worked out and has been followed quite well. RMK has started to draft measures for taking the particularities of landscapes into account while managing the forests. However, despite pressure from environmentalists during certification, the share of clearcut-free management in RMK has not risen. Estonian foresters and forestry scientists often cannot accept forestry without clear cuts.

Our respondents described many concrete environmental impacts of certification:

- (a) RMK is keeping records and systematically planning measures to protect endangered species and biodiversity values. The same goes for sites of historical heritage and value. Previously only environmental agencies produced such data and plans.
- (b) A methodology for preservation of biological diversity has been created and implemented. Conservation of key biotopes, interesting natural sights, dead wood and biodiversity trees is being implemented, although this approach is strange for older foresters. There have been some problems with dead wood and biodiversity trees because some local residents secretly enter felling units to collect firewood from leftover material and do not understand why it is not allowed. There are still foresters for whom a good forest is a cleared and organized one.
- (c) Many discussions have ensued from the inclusion of the spring truce concept in the national sustainable forestry standard. In the RMK

certification, the SmartWood Baltic Standard was used and RMK established a special strategy for forest management during spring and summer. RMK has voluntarily cancelled most forest operations for the period of April 15 to June 30 to minimize disturbances to breeding animals and birds. RMK uses this period for vacations, maintenance of machinery, and planting of forests. According to environmentalists and the general public, the spring truce has improved the state of the environment and created a positive image for RMK. Thus the spring truce is among the very few examples of activities caused by certification that have broad public support, appearing as headlines in prominent newspapers (Eesti Päevaleht 2004; Schank 2004).

- (d) Some success has been achieved in stopping establishment of new amelioration networks in forests (Kuuba 2004). For renovation of existing drainage systems and establishment of new forest roads, at the very least, environmental assessment and respective planning is being carried out prior to such projects (Schults 2004).
- (e) Work has begun to limit the use of chemical substances and exotic species. Our research also revealed, though, that some forest officials are dissatisfied with this development. They are certain that chemicals help to save trees from pests, and planting exotic species is a long-standing tradition in Estonia.
- (f) Although some activities at RMK allegedly still take place spontaneously, key activities are planned in a more strategic way and their implementation is more carefully controlled.

Skeptical forest officials and entrepreneurs resent strict environmental measures because they limit their decisional latitude in forest management. Much resistance and misunderstanding is caused by the call to leave dead and biodiversity trees in the forest, as it is seen as a waste of resources and esthetically ugly and disturbing. There are also concerns that too many areas have been designated for conservation purposes, further limiting the possibilities for forest management. Many people are quite critical of the spring truce. The period is seen as too long and the entire approach of a ban as too radical.

There are also some skeptical environmentalists who find that certification looks nice only on paper, while forest management practices remain largely unchanged and destruction of landscapes and soils continues, as does the use of chemicals. They say that certification was a tactical step taken by RMK to fool environmental NGOs and the international audience. Other experts contend that although it may have improved management of the state lands, the certification of RMK has, indirectly, led to the over-logging of private forests.

CONCLUSION

Certification has introduced a new paradigm to the Estonian forestry sector. Its most important achievement has been initiating discussions among different stakeholders in the Estonian National Working Group on Forest Certification since 1998. New ideas have emerged among foresters and NGOs, and an entire generation has become aware of sustainable forestry. All of The State Forest Management Center (RMK)'s holdings, representing forty percent of Estonian forests, have been FSC certified. This has improved both environmental quality and the country's forestry reputation. RMK has established rules for managing its forests while saving the environment, and has also worked hard to implement those rules. Efforts have been made to increase social security for forest laborers.

Certification has not yet reached private forest owners. Most of their forest holdings are smaller than ten hectares. Furthermore, organization and cooperation among private forest owners is minimal, making it difficult to exchange information, promote certification, and communicate effectively. Cooperation of landowners is also slow in Estonia because, after 50 years of the centrally-controlled Soviet system, forest owners want to be masters of their land. Thus, certification has not solved the main forestry problems such as unsustainable over-logging and illegal forestry, which are widespread in private forests but were never very serious in the State forests. If certification is to increase its influence in achieving better forest management in the future, it will have to include and involve private forest owners. This goal could be reached if certified products were valued more highly in markets so that private forest owners would be in a position to make financial gains following support for forest certification.

No major obstacles were encountered during the development of standards and certification processes. Both the FSC and PEFC initiatives faced the problem of low interest among stakeholders and experts. Estonia is a small country and the number of people dealing with forestry and certification issues is quite limited. Those involved are already overloaded with work and it is difficult to book additional time for participation in new initiatives or discussions. It seems that a similar problem is appearing across the whole region of Central and Eastern Europe.

In the authors' opinion, finding and promoting markets for certified timber is vital to facilitate further development of forest certification. Closer cooperation among forest owners and the promotion of group certification to reduce the costs of certification are essential steps to facilitate certification among private forest owners. To maintain and support further development of the certified marketplace, an effort should be made by NGOs to promote and support the companies that have achieved CoC certification and to introduce the idea of certification among forest and timber industry on a larger scale.

More detailed and evidence-based evaluation of the specific environmental, social and economical effects of forest certification is one of the most important research topics in coming years. A set of qualitative and quantitative methods and indicators should be developed to achieve accurate results, which ought to elucidate challenges as well as further knowledge of the range of results and benefits, which, seen in their entirety, may help increase support for certification.

ACKNOWLEDGEMENTS

This work was partly funded by target funding project No. 0182143s02 of the Estonian Ministry of Education and Science. The authors are grateful to the respondents and persons interviewed and also to others assisting with the research. Special thanks go to members of the national FSC Working Group and to the employees of NEPCon, RMK and Baltic Connexions.

REFERENCES

- Ahas, R. 1999. Underlying Causes of Deforestation and Forest Degradation in Estonia: A Local Level Case Study in Põlva County. In Foley, M.E., Moussa, J., Verlome, H.J.H. eds., *Addressing the Underlying Causes of Deforestation and Forest Degradation*. Washington DC, Biodiversity Action Network: 73–74.
- Ahas, R. 2003. Estonian Land Reform. *Taiga News* 43. Summer 2003. Taiga Rescue Network.
- Ahas and Hain. 2003. Varimetsandust tuleb käsitleda laiemalt. (Illegal forestry needs to be discussed more broadly) *Magazine Eesti mets* 3/2003.
- Ahas, R., Nuum, T., Tiru, M. 2002. *Illegal Forestry in Estonia*. Tartu: Estonian Green Movement-FoE.
- EFSC. 2001. Metsade inventeerimine statistilise valikmeetodiga 2001. aastal. Riigihankelepingu nr.2-19-20/727 Aruanne. (Forest Inventory with Statistical Selection Method in 2001, report of public procurement contract nr. 2-19-20/722). Estonian Forest Survey Centre.
- EFSC. 2003. Eesti Metsad 2002 Metsavarude hinnang statistilisel valikmeetodil (Estonian Forests 2002. Forest Inventory with Statistical Selection Method). Estonian Forest Survey Centre.
- Eesti Keskkonnaühenduste Koda. 2002. Keskkonnakaitsjad toetavad RMK “raierahu” algatust - pressiteade 25.02.2002 (Environmentalists support spring truce initiative of RMK - press release from 25.02.2002). www.roheline.ee/index.php3?what=press/press36.html.
- Eesti Päevaleht. 2004. RMK kehtestas raierahu (RMK established silent felling season). *Eesti Päevaleht* (Estonian daily newspaper) 06.04.2004.
- EGM. 2004. *Illegal Forestry and Estonian Timber Exports*. Estonian Green Movement-FoE and Taiga Rescue Network, Sweden.
- ELF. 2003. ELF sõlmis Estonian Celliga kohtuvälise leppe - pressiteade 12.03.2003 (ELF reached an outside court agreement with Estonian Cell – press release from 12.03.2003). www.elfond.ee/alaleht.php?id_kategooria=580&keel=eesti
- ELF. 2002. Kokkuvõte vestlustest erametsaomanikega. Summary of interviews with private forest owners. Estonian Fund for Nature.
- EMTL. 2003. Riigimetsa Majandamise Keskus rakendab kevadel raierahu - pressiteade 14.03.2003 (RMK Enforces Spring Truce – press release of EMTL from 14.03.2003). www.emtl.ee/index.php?id=1422.

- Estonian Forest Code. 1998. RT I 1998, 113/114, 1872. <http://www.legaltext.ee/text/en/X30025K5.htm>
- FDP. 1997. Eesti Riiklik Metsapoliitika. (Estonian National Forest Policy).
- FDP 2001. Eesti Metsanduse Arengukava Aastani 2010. (Estonian Forest Development Programme until 2010). Ministry of the Environment. (viidet pole tekstis)
- Feilberg, P. 2004. Interview with CEO of NEPCo, the regional certification partner of FSC-accredited Certification Body SmartWood.
- Forest Act. 1998. Metsaseadus. RT I 1998, 113/114, 1872.
- Forest Yearbook. 2001. Aastaraamat Mets 2001. Centre of Forest Protection and Silviculture. Tartu 2002.
- Forest Yearbook. 2002. Aastaraamat Mets 2002. Centre of Forest Protection and Silviculture. Tartu 2004.
- FSC. 2004. FSC Chain of Custody and Forest Management/Chain of Custody Certificates as of 3 February 2004. Available at <http://www.fscoax.org/>. Last accessed 12 February 2004.
- Hain, H. 2002. Kevadsuvine raierahu rakendamine Eesti Riigimetsade Majandamise Keskuse näitel. (Implementation of silent felling season on springtime: Case study of Estonian Forest Management Center). Tartu University.
- Hain, H. 2003. Varimetsanduse mõiste ja ulatuse määramine Eestis (The concept of forest crime and extent in Estonia). Tartu University.
- Hain, H. and Ahas, R. 2005. The structure and estimated extent of illegal forestry in Estonia. *International Forest Review*. 7(2): 90-100.
- Kallas, A. 2002. Public forest policy making in post-Communist Estonia. *Forest Policy and Economics*. Vol. 4: 323-332.
- Kaubi, U. 2004. Interview with the Marketing Manager of Estonian State Forest Management Center.
- Kultuur ja Elu. 2004. Tsaarivalitsus keskkonnaministeeriumis. (Czar's regime in the Ministry of Environment) Kultuur ja Elu 1: 39-41.
- Kuuba, R. 2004. Aitame loodusel taastuda. (Let's help nature to recover) Eesti Loodus 3.
- Laanetu, N. 2004. Metsakraavidel on ka pahupool. (Forest drainage ditches have their bad sides) Eesti Loodus 3.
- Land Board. 2004. Raw data submitted upon request.
- Lillemets, O. 2004. Interview with the Environment Manager of Estonian State Forest Management Center.
- Marvet A. 2004. Metsakraavil on kaks otsa. (Forest ditches have two ends) Eesti Loodus 3.
- Ministry of Environment. 2003. Eesti metsanduspoliitikas tuleb muutusi. EKM presiteade 21.04.2003. (There will be changes in Estonian forest policy, press release of Estonian timber Industries Association) <http://www.envir.ee/ministeerium/uudised/2003/4.html#21>.

- Oja, A. 2001. Certification as communication between certificate holder and consumer. Plenary presentation on the International Conference on Forest Certification in the Baltic Sea Region, Baltic Agenda 21 Forestry Sector FO6 Working Group, 15–17 November 2001, National Library, Tallinn, Estonia.
- Oja, A. and Aitsam, V. 2001. Saime oma metsastandardi. (We got our own forest standard) *Maaleht* 04.01.2001: 1(691).
- Oja, A. 2002. Consensus building on sustainable forest management (Estonia), in Tariq Banuri, Adil Najam, Nancy Odeh, eds. *Central and Eastern Europe Report on Civic Entrepreneurship – A Civil Society Perspective on Sustainable Development*. Volume VII, Stockholm Environment Institute. Gandhara Academy Press: 54-59.
- Pöld, K. 2004. Interview with the director of Private Forest Center and contact person for Estonian PEFC initiative.
- RMK. 2001. RMK Development Plan for Years 2001-2003. Estonian State Forest Management Centre. (viidet pole tekstis)
- RMK. 2002. RMK Yearbook 2001. Estonian State Forest Management Centre.
- RMK. 2003. RMK Yearbook 2002. Estonian State Forest Management Centre.
- Schank, E. 2004. Tagasilöök metsatööstuses. (Drawbacks in forestry) *Eesti Ekspress* 22.01.2004.
- Schults, J. 2004. Metsakraave ei tohi raisku lasta. (Forest ditches should not be wasted) *Eesti Loodus* (3).
- SOE. 2002. Tööstus (Industry) 4/02. Statistical Office of Estonia.
- SOE. 2003. Rahvastik (Population) 2002. Statistical Office of Estonia.
- SOE. 2004. Main Social and Economic Indicators of Estonia. Monthly bulletin 3/04. Statistical office of Estonia. Tallinn.
- SOE database 2004. Internet database. Available at <http://www.stat.ee>. Last accessed 12 February 2004. Statistical Office of Estonia.
- SW database. 2004. Internet database. Available at <http://www.brandsystems.net/smartwood>. Last accessed 12 February 2004. SmartWood.
- Talijärv, A. 2004. Interview with the managing director of Estonian Forest Industries Association.
- Tallinna Pedagoogikaülikool. 2003. Estonian Human Development Report.
- Tonisson, K. 2000. An Analysis of the Scientific Soundness and Economic Implications of FSC-based Forest Certification for Estonia. MSc thesis. Environmental Change Institute. University of Oxford.
- Tonisson, K. 2004. Interview with the director of NEPCon Estonia. (NEPCon Estonia is conducting FSC certification activities in Estonia and other Eastern European countries and has also provided certification services for certification of Estonian State forest and most Chain of Custody certified companies in Estonia).
- Trapido, T. 2004. Interview with managing director of Estonian Fund for Nature.
- Valgepea, M. 2004. Interview with director of the forestry statistics board of The Centre of Forest Protection and Silviculture.

ACRONYMS

BVQI	Bureau Veritas Quality International
CoC	Chain of Custody
EGM	Estonian Green Movement
ELF	Estonian Fund for Nature
EFSC	Estonian Forest Survey Centre
EMTL	Estonian Forest Industries Association
FoE	Friends of the Earth
FSC	Forest Stewardship Council
ISO	International Organization for Standardization
NGO	Non-Governmental Organization
NWGFC	The Estonian National Working Group on Forest Certification
PEFC	Programme for the Endorsement of Forest Certification (formerly the Pan-European Forest Certification Programme)
RMK	State Forest Management Center
SEI-T	Stockholm Environment Institute, Tallinn Branch
SOE	Statistical Office of Estonia
TRN	Taiga Rescue Network