

Chapter 10

Public procurement policies driving certification: certified forest products markets, 2005-2006⁵⁴

Highlights

- Certified forest area increased by 12% from 2005, reaching 270 million hectares by mid-2006, which is 7% of the global forest area.
- Certification remains largely confined to the northern hemisphere's temperate and boreal forests, and to developed countries: 87% of certified forest is in the UNECE region (58% in North America and 29% in western Europe).
- Roundwood production from certified forests represents approximately 25% of global production but only a tiny amount of this is labelled as being of certified origin.
- Only 2.7% of the commercially accessible forests in Russia were certified by mid-2006, making Russia's vast forests the prize for certification schemes: the Forest Stewardship Council (FSC) certified 9 million hectares in 2005, while a Russian certification scheme may apply for endorsement by the Programme for the Endorsement of Forest Certification (PEFC).
- Chain-of-custody certificates increased by approximately 20%, reaching 7,200 certificates worldwide, which still covers only a fraction of overall trade.
- In Asia, markets for certified forest products (CFPs) are rising in Japan, but China is producing CFPs mainly for export to North America and Europe.
- Public procurement policies for wood and paper products are increasingly specifying CFPs for assurance of sustainable forest management.
- Except in the Netherlands, there is a lack of demand from final consumers for CFPs.
- Procurement policies accounted for the origin of forest products, as well as the EU Action Plan for Forest Law Enforcement, Governance and Trade, may increase demand for CFPs.
- By May 2006, Canada accounted for over half of PEFC and almost one quarter of FSC worldwide certifications: the PEFC umbrella now covers more than two thirds of the total certified forest area worldwide, with FSC accounting for another 28%.
- Certification of non-wood forest products is gaining importance in developing countries as well as in the developed world.

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Secretariat introduction

Certified forest products (CFPs) have received attention from Governments in new procurement policies for wood and paper products, which aim to ensure that purchases come from sustainably managed legal sources. Certification of sustainable forest management is also receiving more international attention as Governments develop policies on forest law enforcement and governance issues.

Private companies who want to project a “green” image in line with their corporate responsibility strategies are increasingly adopting similar responsible purchase policies in all sectors and not just in the forest sector. The UNECE Timber Committee monitors markets for CFPs, while the FAO European Forestry Commission follows developments in forest certification. They have jointly published a series of UNECE/FAO *Geneva Timber and Forest Discussion Papers* on certification issues.⁵⁵

Following the 2005 market discussions, the Timber Committee and European Forestry Commission held a policy forum, *Forest Certification: Do Governments Have a Role?*⁵⁶ This showed that the level of government involvement varies considerably between countries: some take an active role in national certification, while others consider it a market responsibility and therefore avoid direct involvement. One outcome from 2005 was the decision to organize another policy forum in October 2006, *Public Procurement Policies for Wood and Paper Products and their Impacts on Sustainable Forest Management and Timber Markets*.

There are currently no official statistics for trade in CFPs, as confirmed by the FAO/UNECE Working Party on Forest Economics and Statistics in May 2006, reflecting the fact that CFPs do not feature in the Harmonized Commodity Description and Coding System (HS) maintained by the World Customs Organization. Therefore, the analysis presented here has been based on other sources, including responses from a survey of the UNECE Timber Committee and the network of country correspondents on certification of sustainable forest management and certified forest products markets of the FAO European Forestry Commission in the UNECE region. In addition, the authors interviewed key producers, retailers of CFPs, Global Forest and Trade Networks⁵⁷, auditing bodies and certification systems. The secretariat thanks all those who responded to these surveys, especially the country correspondents. Unless

otherwise attributed, all estimates and opinions in this chapter are from the authors' interpretations and analysis of the results of these surveys.

We sincerely appreciate the role of Mr. Florian Kraxner,⁵⁸ expert in CFPs, International Institute for Applied Systems Analysis, Laxenburg, Austria, who again led the production of this chapter. Dr. Eric Hansen,⁵⁹ Professor, Oregon State University, US, who wrote the first chapter on CFPs in 1998, contributed again to this analysis. He also presented CFP markets at the last Timber Committee Market Discussions. We welcome the new perspective on Asia provided by Prof. Toshiaki Owari,⁶⁰ University of Tokyo, Japan.

10.1 Introduction

The UNECE region's CFP markets have been analysed in a chapter in the UNECE/FAO *Forest Products Annual Market Review* since 1998. This year's chapter provides an overview of the market and trade of CFPs and concentrates on policy-related aspects of certification in the forest sector. CFPs bear labels demonstrating, in a manner verifiable by independent bodies, that they come from forests that meet standards for sustainable forest management (SFM). Consumers might find labels on furniture and wood products, while manufacturers can verify the sources through the certification scheme's chain-of-custody (CoC) procedures. Non-independently certified forests and their CFPs and process certification schemes such as ISO 14001 are not included in this analysis.

10.2 Supply of CFPs

By May 2006, the area of certified forest worldwide totalled 270 million hectares, approximately 7% of the world's forests (3.9 billion hectares) (FAO, 2005), a relatively steep increase since the first third-party certification of forest area took place in 1993 by the Forest Stewardship Council (FSC). However, compared

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⁵⁵ Available at: www.unece.org/trade/timber/mis/cfp.htm

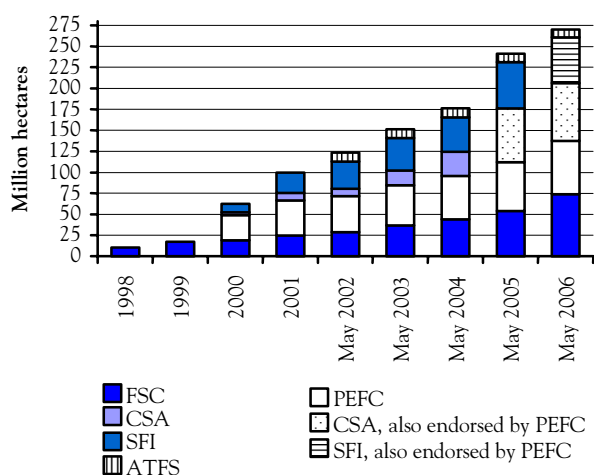
⁵⁶ Available at: www.unece.org/trade/timber

⁵⁷ WWF-led partnerships for responsible forest management and trade between non-governmental organizations, companies and communities.

with the previous survey period (May 2004 – May 2005), the annual rate of increase in certified area has fallen by half to some 12% during the last 12 months. Approximately 1.5 million hectares in Sweden and another 0.8 million hectares in Canada are double certified by two different systems (graph 10.2.1).

GRAPH 10.2.1

Forest area certified by major certification schemes, 1998-2006



Notes: As of mid-2006 approximately 2.3 million hectares have been certified by more than one scheme. These are not deducted from one or the other scheme. The graph therefore shows a slightly higher amount of total forest area certified than exists in reality. FSC=Forest Stewardship Council. PEFC=Programme for the Endorsement of Forest Certification Schemes. CSA=Canadian Standards Association system (endorsed by PEFC in 2005). SFI=Sustainable Forestry Initiative (endorsed by PEFC in 2005). ATFS = American Tree Farm System.

Sources: Individual certification systems, country correspondents and Canadian Sustainable Forestry Certification Coalition, 2006.

Forest industry and consumers alike desire mutual recognition by two or more certification systems. However, this is not feasible between FSC and the Programme for the Endorsement of Forest Certification schemes (PEFC) in the near future due to controversies between them. Hence, there is a tendency in forest and CoC certification towards “dual-certification” or “double certification”, i.e. the certification by two or multiple third-party schemes at the same time for the same forests and the same products (figure 10.2.1).

Since 2000 the certified forest area has risen sharply every year, mainly due to certification by:

- American Tree Farm System (ATFS);
- Canadian Standards Association Sustainable Forest Management Program (CSA, endorsed by PEFC in 2005);
- FSC;
- PEFC, formerly known as the Pan European Forest Certification System;
- Sustainable Forestry Initiative (SFI, endorsed by PEFC in 2005) in the US and Canada.

FIGURE 10.2.1

Certification logos



Source: Certification systems, 2006.

In addition, the international Dutch Keurhout System has approved approximately 4.4 million hectares in Malaysia and some 1.2 million hectares of independently certified forests in Gabon.

PEFC endorsed the CSA system at the beginning of 2005, as well as SFI, the second largest certification scheme in North America, by the end of 2005. Allowing SFI to bear the PEFC label means including another 69 million hectares under the PEFC umbrella, which now totals 187 million hectares of certified forest area worldwide. Nevertheless, compared with the exponential growth of previous years, the increasing development of PEFC has slowed in terms of hectares added to the globally certified forest area.

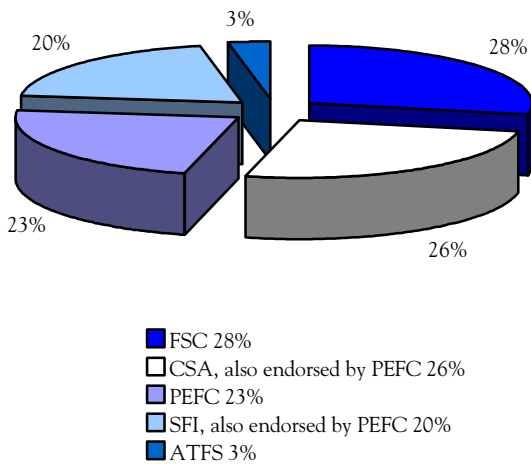
FSC listed a total of 74 million hectares in May 2006, an increase of more than 20 million hectares, or one third by this scheme during the last 12 months. With SFI, PEFC has been able to include another big certification scheme in its system, but the resulting consortium could only increase its total certified area by some ten million hectares, or by 5%, from May 2005 to May 2006.

The third major system of North America is ATFS, which has remained relatively stable throughout the last five survey periods. Of the 11.7 million hectares in the ATFS, 10 million are certified. ATFS is seeking endorsement by PEFC and might join within the next year.

In terms of share of certified forest area, the market seems relatively equally divided (graph 10.2.2). FSC is slightly ahead, accounting for 28% of the area certified globally. With a share of 26%, CSA is the second largest scheme, slightly ahead of PEFC, with 23%, followed by SFI, with 20%. The smallest market share among the five major schemes is still held by ATFS, with 3% as of May 2006. As the CSA scheme and the SFI scheme were endorsed by PEFC in 2005, the total market share of the combined systems that are allowed to use the PEFC label on their CFPs has increased to more than two-thirds (69%).

GRAPH 10.2.2

Share of certified forest area by major schemes, 2006



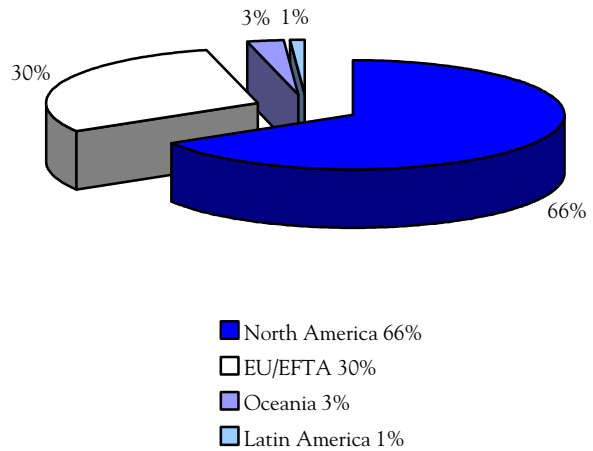
Notes: If a forest area has been certified to more than one standard, the respective area has been counted to each of the certifying schemes involved; hence the grand total of certified forest area in this graph shows a higher amount (approximately 2.3 million hectares more) than exists in reality. ATF=9 million ha. CSA endorsed by PEFC=69 million ha. FSC=74 million ha. PEFC=63 million ha. SFI endorsed by PEFC=54 million ha. As of mid-2006.

Sources: Individual certification systems, Forest Certification Watch and Canadian Sustainable Forestry Certification Coalition, 2006.

Most of the PEFC-certified forest area lies in the northern hemisphere, i.e. non-tropical zones, with two thirds of it outside Europe (graph 10.2.3). The share in the tropics is less than 1%, but Gabon will soon be the first African country producing wood under the PEFC label. There is no PEFC-certified forest area in Asia or in European countries outside EU/European Free Trade Association (EFTA).

GRAPH 10.2.3

Regional distribution of certified forest area by PEFC (and PEFC - endorsed systems), 2006



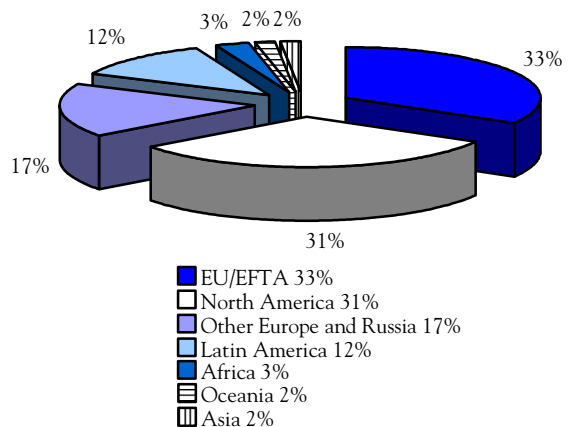
Notes: Distribution of the certified forest area within the PEFC system, including the endorsed CSA and SFI in North America. As of mid-2006.

Source: PEFC, 2006.

The spread of forests certified by FSC is more diverse than PEFC, but the overwhelming majority still lies in the northern hemisphere (graph 10.2.4).

GRAPH 10.2.4

Regional distribution of certified forest area by FSC, 2006



Note: As of mid-2006.

Source: FSC, 2006.

TABLE 10.2.1

Certified forest area and certified roundwood production by region, 2005-2006

Region	Total forest area (million ha)	Total certified forest area (million ha)		Area certified (% of total forest)		Estimated industrial roundwood produced from certified forest (million m ³)		Estimated % of global industrial roundwood from certified forests	
		2005	2006	2005	2006	2005	2006	2005	2006
North America	470.6	140.2	157.7	29.8	33.5	180.6	201.8	11.38	12.71
EU/EFTA	155.5	78.5	78.9	50.5	50.7	160.1	162.5	10.09	10.23
EECCA	907.4	8.8	13.0	1.0	1.4	1.6	2.3	0.1	0.82
Oceania	197.6	3.4	6.4	1.7	3.3	0.9	1.6	0.05	0.10
Africa	649.9	6.2	2.1	1.0	0.3	0.7	0.2	0.04	0.01
Latin America	964.4	2.3	11.1	0.2	1.1	0.4	1.9	0.03	0.12
Asia	524.1	0.8	1.1	0.2	0.2	0.4	0.5	0.02	0.03
World total	3869.5	240.2	270.3	6.2	7.0	344.6	370.8	21.71	24.02

Notes: The source of the forest area (excluding "other wooded land") and industrial roundwood production from certified forests is FAO's *State of the World's Forest 2005* data. Roundwood production has been estimated by multiplying annual roundwood production from "forests available for wood supply" by the percentage of the regions' certified forest area (i.e. it has been assumed that the removals of industrial roundwood from each hectare from certified forests is the same as the average for all forest available for wood supply). However, not all certified roundwood is sold with a label. EECCA represents Eastern Europe, Caucasus and Central Asia, the new UNECE term for the 12 Commonwealth of Independent States (CIS) countries.

Sources: Individual certification systems, Forest Certification Watch, the Canadian Sustainable Forestry Certification Coalition, 2006, FAO, 2005 and the authors' compilation. As of mid-2006.

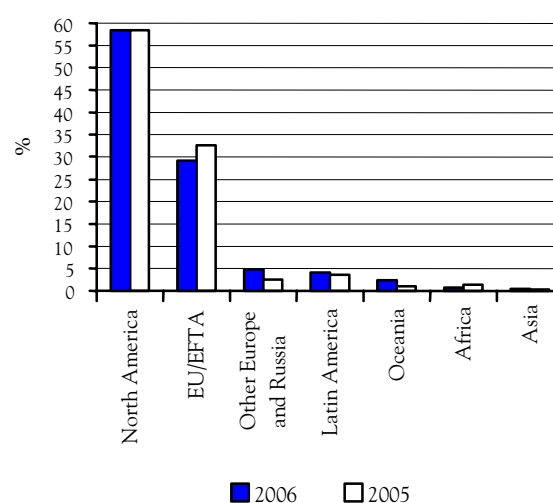
More than half (58%) of the world's certified forest is in North America, with around one third (29%) in the EU/EFTA region. North America's share of the certified forest area has remained almost unchanged since 2005, while the proportion in EU/EFTA is falling relative to increases in the share of other European countries, Russia, Latin America and Oceania. Nevertheless, even with this change, the area certified outside EU/EFTA and North America still only accounts for 12% of the global total (graph 10.2.5).

While the original driver for certification might have been uncontrolled deforestation in the tropics, in practice, its adoption has been far more successful in the northern than in the southern hemisphere, in the temperate and boreal regions than in the tropical zone, and in the developed than in the developing world. This trend still appears to be increasing. The ambitious certification efforts that are currently under way in the world's most forest-rich country, Russia, are likely only to serve to emphasize these disparities.

In western Europe, approximately half of the total forest area is certified, compared with one third in North America. The proportions in all other regions are much smaller, reaching a maximum of 1%, except for Oceania, with 3% of its forest area currently certified. In all regions except Africa, where there has been a decrease, the proportion of certified forest has increased since 2005 (graph 10.2.6 and table 10.2.1). The slight decrease in

Africa was caused by certified areas which, when audited, could not obtain an extension of their certification due to mismanagement or other problems.

GRAPH 10.2.5

Geographical distribution of total certified forest area, 2005-2006

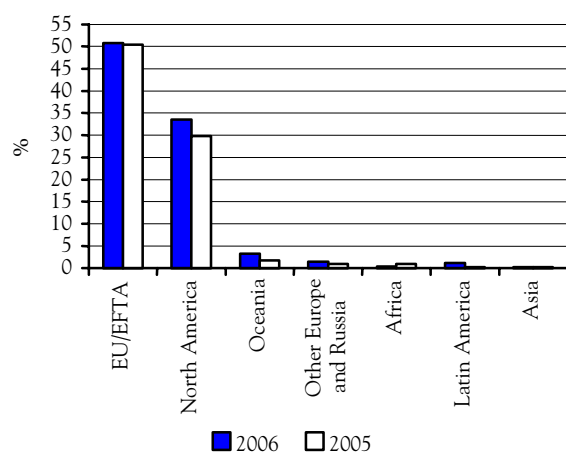
Notes: All major certification schemes combined. As of mid-2006.

Sources: Individual certification systems, Forest Certification Watch and Canadian Sustainable Forestry Certification Coalition, 2006.

The potential roundwood supply from the world's certified forests in 2006 is estimated at approximately 370 million m³, 8% more than in 2005 (table 10.2.1). This equates to approximately 25% of the world's production of industrial roundwood, or about 40% of the industrial roundwood production of North America and Europe (without Russia) where 87% of certified forests are situated. To estimate roundwood production from certified forest area, the regions' average annual removals on "forests available for wood supply" are multiplied by the percentage of the regions' certified forest area. According to the UNECE/FAO definition, roundwood is composed of industrial roundwood and fuelwood; however, the latter was not considered in this estimation.

GRAPH 10.2.6

Certified forest as a percentage of total forest area by regions, 2005-2006



Notes: The forest area is based on the *FAO State of the World's Forests 2005* data, excluding the category "other wooded land." As of mid-2006. Asia is 0.2%.

Sources: Individual certification systems, Forest Certification Watch, Canadian Sustainable Certification Coalition 2006 and FAO, 2005.

North America is the region with the largest area of certified forest. Canada dominates with 120.7 million hectares of certified forest, almost four times that of the US (34.6 million ha) (graph 10.2.7). Even though the rate of increase in certified forest area has slowed, Canada's certified area grew by almost 20% in 2005. By May 2006, over half of PEFC-certified forest and almost one quarter of FSC-certified area were in Canada. The certified area in the US decreased by one million hectares. There were no significant increases in certified forest area in Finland (22.1 million ha), Sweden (15.6 million ha) and Norway (9.2 million ha). The same was true for Germany (7.7 million ha) and Poland (6.2 million ha). The newcomers in the top ten are Russia,

ranked sixth (9 million ha), followed by Australia (5.6 million ha) and Brazil (4.3 million ha). Russia and Australia showed growth rates over 100%.

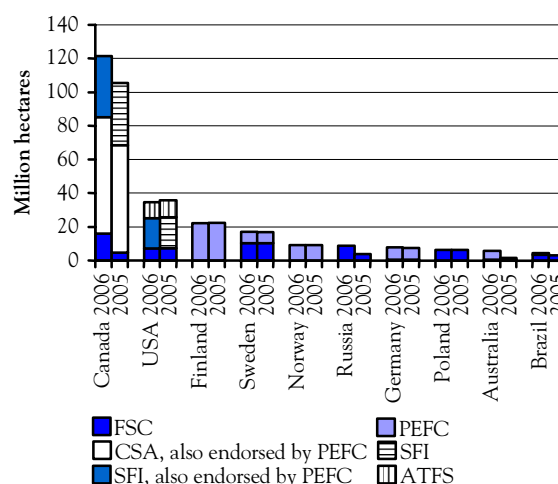
In most of the top ten countries there is a clear tendency towards a single certification scheme. Canada, Finland, Norway, Germany, Australia and France are clearly dominated by PEFC or PEFC-endorsed systems. In Russia, Poland and Brazil, FSC is the predominant system. The US and Sweden have several schemes certifying almost equal amounts of forest.

Australia and Brazil have become the first countries from outside the UNECE region to feature among the top ten, but there are more countries that might enter the stage in the near future, such as Bolivia (1.9 million ha) and South Africa (1.6 million ha).

There are seven new countries that have certified forest area, two of which are within the UNECE region: Bulgaria (21,000 ha by FSC) and Luxembourg (17,088 ha by PEFC). Outside the region there is an increment of tropical and sub-tropical forest area certified totalling approximately 700,000 hectares in Guyana, Laos, Cameroon, Mozambique, the Republic of Korea and Viet Nam. FSC has issued the first certificates in all of these tropical countries.

GRAPH 10.2.7

Top 10 countries' certified forest area, 2005-2006



Notes: The graph contains no overlap owing to double certification. Areas are as of mid-2006 and mid-2005.

Sources: Individual certification systems, country correspondents, Forest Certification Watch and Canadian Sustainable Forestry Certification Coalition, 2006.

10.3 Demand for Certified Forest Products

Some European wood-producing countries such as Finland and Austria are close to reaching or have already reached 100% certification of their forests. This means that the entire roundwood production could bear a certification label from one of the major approving schemes. However, due to the frequent lack of demand by final consumers, on the one hand, and lack of incentive for the producer (i.e. a market advantage such as a price premium), on the other, the vast majority of these products, as in previous years, are marketed without any reference to certification. Netherlands is an exception, where the consumer is seen as the driving force for CFPs in the market. Downstream industries do not usually ask for commodity products to be certified, hence potential supply of CFPs exceeds actual demand in many markets, especially of PEFC-certified CFPs. An additional constraint impeding awareness of CFPs among the public is that most companies did not communicate that their products were certified (Owari *et al.*, 2006).

FSC CFPs from tropical wood are increasingly appearing in the shelves of do-it-yourself retailers and even supermarket chains selling garden furniture from tropical wood in western and central Europe, including the United Kingdom.

CFPs remain difficult to quantify due to the lack of official figures and trade classifications. One practicable tool for describing market characteristics such as the amount of CFPs in business-to-business markets is the number and type of CoC certificates.

Since 1998 the number of such certificates has increased tremendously. Between May 2005 and May 2006 the rate of increase was 20%, slightly lower than in previous years (graph 10.3.1). By mid-2006 the number of certificates worldwide totalled 7,200, of which 64% were by FSC and 36% by PEFC. These proportions are identical to those from the last survey, which indicates that both systems have increased at the same rate (20%) over the last year in terms of certificates issued. Prior to that, PEFC had enjoyed a significantly higher rate than FSC.

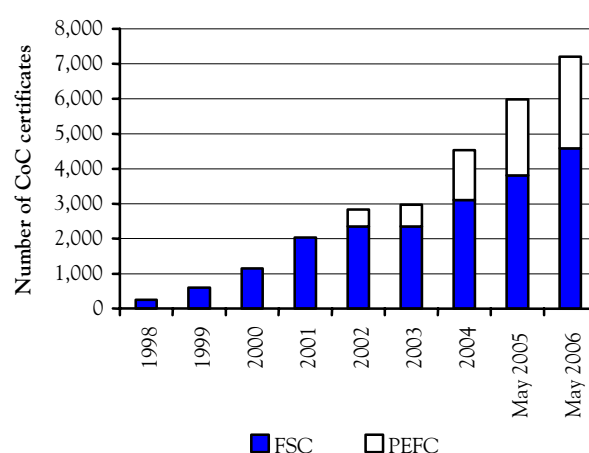
With some exceptions, the rate of increase in individual countries has been fairly evenly distributed. PEFC mainly gained in France (+207) and the United Kingdom (+102), as well as in the Czech Republic (+57), Belgium (+50), Canada (+48) and Germany (+45). During the past 12 months, the PEFC system has issued the first CoC certificates in Chile (nine) and China (two). On the other hand, FSC grew mostly in the United Kingdom (+118), as well as in the US (+87), the Netherlands (+55), China (+52), Japan (+42) and Germany (+46). FSC has approved the first CoC

certificates in Hong Kong S.A.R. (six) and New Zealand (one).

Both the SFI and CSA systems in North America have developed logos, licensing procedures and on-product labelling, but have not yet issued CoC certificates. FSC and PEFC remain the only schemes on the market, offering full CoCs for CFPs. FSC certificates have so far been issued in 73 (two new) countries and PEFC certificates in 22 (two new) countries.

GRAPH 10.3.1

Certification chain-of-custody trends worldwide, 1998-2006



Notes: The numbers denote CoC certificates irrespective of the size of the individual companies, or of volume of production or trade. As of May 2006.

Sources: FSC and PEFC, 2006.

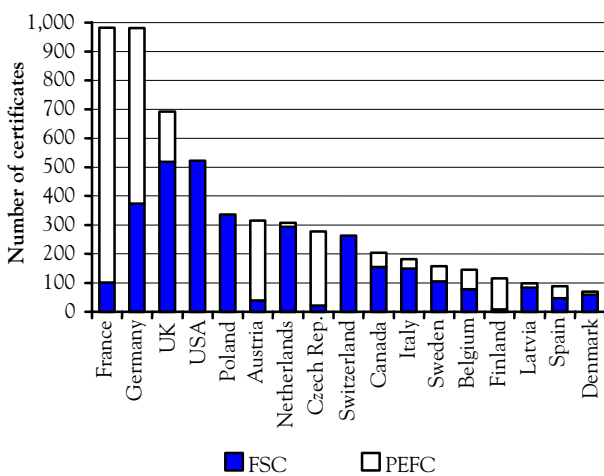
Using the total number of CoC certificates issued per country as an indicator for business-to-business demand for CFPs, France has taken the lead position from Germany within the UNECE region (graph 10.3.2). France had certificates from both schemes, PEFC accounting for 90% of all certificates issued in the country and FSC accounting for 10%. Germany is now rated second, with 62% of its certificates issued by the PEFC system, which is growing at the same rate as FSC certification. In third position is the United Kingdom, ahead of the US and Poland. Switzerland lost its position to the US because of the interim suspension of the Swiss Q-label system due to a non-conformity with the PEFC regulations. This ranking illustrates that in most countries' markets, with the exception of Germany, Belgium and Spain, there is an obvious dominance of one system, tending to converge toward one of the certification schemes.

In countries outside the UNECE region, almost all companies holding a CoC certificate obtained their certificates from FSC (graph 10.3.3). Japan leads with 310 certificates and is followed by Brazil, with 181 certificates,

and China, with 148 certificates in mid-2006. The important market growth for CFPs for Asia is illustrated over the last year by the dominant position of Japan, the 50% growth in CoC certificates in China and the large number of certificates issued in Viet Nam, Malaysia and Indonesia. Growth in Asia is rising in parallel to South America. However, these companies are most often exporting to North America and Europe, rather than supplying their domestic markets, which have not yet demanded certified products.

GRAPH 10.3.2

Chain-of-custody certificate distribution within the UNECE region, 2006



Notes: Countries with less than 50 CoC certificates are not shown. The numbers denote CoC certificates irrespective of the size of the individual companies as of May 2006.

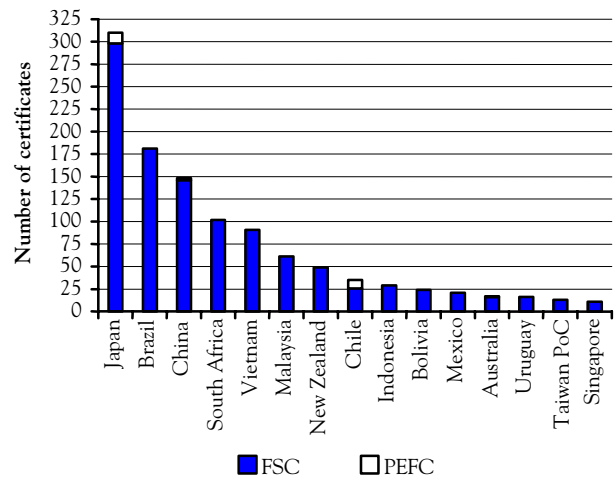
Sources: FSC, PEFC and authors' compilation, 2006.

The distribution of CoC certificates across the product range illustrates that companies from all wood-based industries and trade sectors hold CoC certificates. Companies holding CoC certificates of FSC (64%) cover a relatively wide product range (graph 10.3.4). Generally, the distribution of CoC certificates among industry sectors did not change over the last year. Wood manufacturing and sawnwood producers hold approximately half of the CoC certificates, with equal shares of 26%. Roundwood sellers hold approximately 14% of the certificates, 10% of which are in the furniture sector. PEFC CoC certificates (36% of the total) are mainly issued for timber trade and sawmilling, with almost the same shares, approximately one-third of the total. These two PEFC CoC main sectors are followed by other primary forest industries (13%). In contrast to last year's statistics, the timber trade sector lost some 13% to the benefit of the sawmilling industry and secondary wood manufacturing (graph 10.3.5). Due to non-comparable information and lack of data, one cannot conclude that FSC is the preferred scheme by the wood

manufacturing industry, while PEFC is preferred by the wood trading sector.

GRAPH 10.3.3

Chain-of-custody certificate distribution outside the UNECE region, 2006

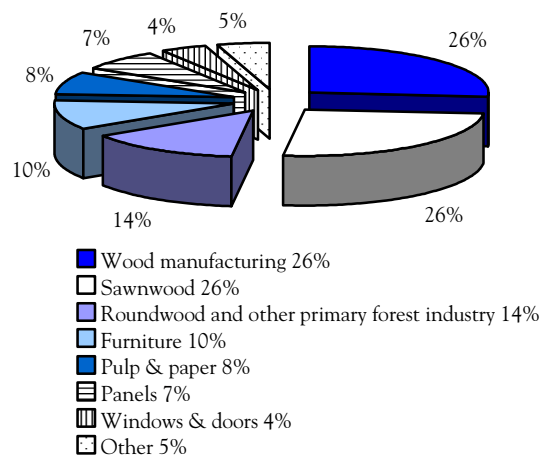


Notes: The graph only includes countries with 10 or more CoC certificates. The numbers denote CoC certificates irrespective of the size of the individual companies as of May 2006. As of mid-2006, neither SFI, CSA nor ATFS have CoC.

Sources: FSC, PEFC and authors' compilation, 2006.

GRAPH 10.3.4

FSC chain-of-custody distribution by industry sector, 2006

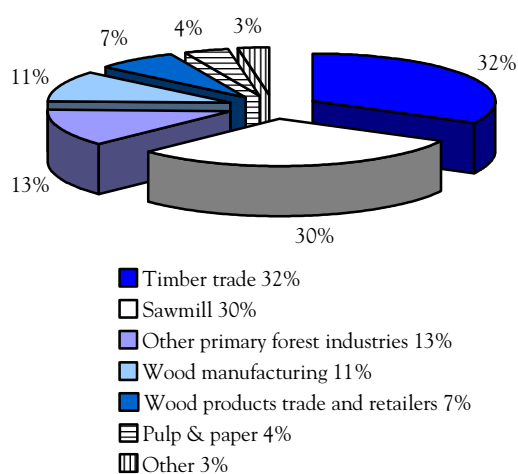


Note: Some overlap between the industry sectors is possible.

Source: FSC, 2006.

GRAPH 10.3.5

PEFC chain-of-custody distribution by industry sector, 2006



Note: Some overlap between the sectors is possible.

Source: PEFC, 2006.

10.4 Policy issues

10.4.1 Public procurement, governance and illegal logging

Public wood procurement policies continue to receive international attention and major developments have occurred in the past year. The emergence of NGO initiatives is very important, especially those concerning green building.

Heightened awareness of illegal logging and the trade of illegally derived wood products has led to an urgent need for better governance. Public procurement policies are increasingly being established as part of the solution to these problems (UNECE/FAO, 2006). During the last three years, major efforts have been taken to establish "green purchase" regulations for public entities by Governments and also by environmental non-governmental organizations (ENGOs) of European countries including Belgium, Denmark, France, Germany, Italy, Netherlands, Spain and Switzerland and the United Kingdom, as well as countries outside Europe, including the US and Japan. In many cases, public procurement officers satisfy the new requirements by purchasing only CFPs, which are seen by many procurement offices as guarantees of legally and sustainably sourced wood and paper products.

This development of the public procurement process for promoting sustainable forest management and giving preference to certified timber is, on the one hand, seen as an opportunity and as one of the driving forces for enhanced worldwide forest and CoC certification. Conversely, the broad public discussion on illegal practices and deforestation might also affect consumer

trust in the certification schemes, or at least reduce the effectiveness of campaigns, communication, information and promotional activities to support forest certification.

At their March 2005 meeting, G8 Environment and Development Ministers outlined a number of steps to combat illegal logging, including public purchasing policies that help ensure that Governments do not contribute to illegal logging. Following the meeting, during the 2005 Gleneagles Summit, G8 leaders agreed to a number of measures to promote sustainable forest management. This action has spurred further development of purchasing policies, although treatment of the issue is inconsistent, with some countries reporting implementation of policies, and others with no developments to report. Several country correspondents reported continued ENGO pressure on Governments to adopt purchasing policies specifying that forest products should come only from sustainably managed forests. The Forestry Agency of Japan recently developed its *Guidelines for Verification of Legality and Sustainability of Wood and Wood Products*, which recognizes the main certification systems active in the UNECE region. According to the PEFC Council Newsletter of May 2006, Belgium recognizes PEFC in its public procurement guidelines.

In the United States, NGO initiatives are having the most significant impact in the marketplace. According to one industry analyst, green building is the main factor driving demand for CFPs, especially those that are FSC certified. The Leadership in Energy and Environmental Design (LEED) green building certification system from the US Green Building Council (USGBC) is growing quickly and maintains its exclusive commitment to FSC certification. Concentrated efforts by forest industry representatives to have the standard broadened have resulted in proposed changes to the system (USGBC, 2006). The Materials and Resources Credit 6 may change from "rapidly renewable" to "bio-based." This would allow entry for use of CFPs from non-FSC systems within LEED. Materials and Resources Credit 7 may also become "bio-based", but still require products from a certified source. It has been suggested that FSC is the only system that would satisfy the certification requirement at this time. If implemented, wood products could earn two of the 69 potential points in the LEED system. The proposed changes will be fully considered after a period of time for public comment. Green Globes, a green building certification system initially funded by the US forest industry (WSJ, 2006), recognizes the main forest certification systems operating in the UNECE region (Green Globes, 2006). Another noteworthy green building effort comes from the National Association of Homebuilders (NAHB). In 2006, the Association published its Model Green Home Building Guidelines, which recognize the main certification systems in the UNECE (NAHB, 2006).

Illegal logging is responsible for vast environmental damage in both developing and developed countries. But the damage is also economic, i.e. through reduced prices for legal timber, which must compete with illegal timber in a distorted marketplace. For example, timber prices in 2004 were between 7% and 16% less than they would have been if there had not been illegal logging, depending on the different product categories (AF&PA, 2006). The global annual loss has been estimated at approximately \$15 billion, taking account of losses to Governments and to legal competitors (World Bank, 2006).

Timber is traded internationally and affected by procurement regulations. Hence, a highly desirable next step in the public procurement and governance procedure is harmonization of different national approaches. This step is also required to avoid artificial trade barriers, especially in the EU countries where most procurement policies are currently being developed. It is expected that harmonizing their national procurement policies will help prevent the same certified timber from being recognized as legal and sustainable in one country while considered inadequate in another. These kinds of market and trade distortions might also put at risk the efforts and achievements of civil society in developing certification as a tool to promote sustainable forest management. The EU Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT) partly responds to this criticism by aiming at an innovative approach to tackle illegal logging. In the plan, the push for good governance in developing countries is linked with the legal instruments and leverage offered by the EU's own internal market.

Participants in the Timber Committee and European Forestry Commission Policy Forum in 2005 in Geneva, Switzerland, pointed out that Governments should try to remain neutral regarding competing schemes when considering their public procurement policies. Governments and other stakeholders should refocus on the commonly shared objective of promoting sustainable forest management, especially combating deforestation. They agreed further that certification is only one tool for achieving this objective and that the lack of information on production, consumption and trade of CFPs constrains decision-making of policy-makers, analysts and market actors.

10.4.2 Certification in the Russian Federation

In 1997, when the new Forest Code of the Russian Federation was published, an obligation in Article 71 was to certify the entire productive Russian forest area and to provide only certified wood to western markets by 2007. Since this government-driven decision, two third-party certification systems have been established in Russia. FSC started its direct certification process with the help of the

Working Group of the Russian National Council on Voluntary Forest Certification in 1999, and issued its first certificate for forest management in 2005. PEFC started its process later in 2004. The National Working Group has been developing the Russian State Forest Certification System since 2001, which aims at acceptance by mid-2006 in order to further proceed with the application for the assessment and endorsement process through PEFC.

FSC has meanwhile certified 8.9 million hectares of forest area mainly in the European part of Russia, but also in central Siberia, easternmost Siberia and the Altai Region. Also, the 27 CoC certificates by FSC were mainly issued in the European part of Russia and the Altai Region (National Working Group on Voluntary Forest Certification – FSC, 2005).

10.4.3 Developments on the Japanese and Chinese markets for certified forest products

Mainly because of their importance on the global wood market, Japan and China are the driving economies for the regional CFP market in Eastern and Southeast Asia. In Japan, a national certification scheme, Sustainable Green Ecosystem Council (SGEC), was introduced in 2003, and major paper manufacturers and house-building companies in Japan have decided to apply for this certificate. The dominating scheme in both Japan and China is FSC. The paper and tissue industries are the majority of CoC certificate holders in these countries.

Of surveyed respondents from the Japanese forest sector and paper industry, 77% had sold CFPs in 2004. The sales value of certified products reported by 84 respondents totalled \$228 million, of which paper products accounted for 90%. The main certified products sold were paper for plain paper copy (PPC) and printing, wood chips as raw material for paper, and printed material such as environmental reports and calendars. Certified wood products such as sawnwood represented only a small proportion of sales. As with companies in Europe and North America, it was not possible for most Japanese companies to receive premium prices for CFPs (Owari and Sawanobori, 2006).

Major paper manufacturers in Japan have procurement policies which increasingly require the use of certified wood as raw material. In addition, the Japanese Government is aiming to tackle the serious problem of illegal logging. The new Law on Promoting Green Purchasing, public procurement requires the use of wood and wood-based products from legal sources. Forest area certification and CoC certification is seen as one appropriate tool to prove and promote legality and sustainability (Owari and Sawanobori, 2006).

In China, a National Forest and Trade Network (FTN) was launched in 2005 (White, 2006). Among the members there are eight companies representing some 425,000 hectares of FSC-certified forests and 753,000 m³ (roundwood equivalent) of certified products in trade as of June 2006 (GFTN, 2006). Among the members of this fast growing network, the main drivers for the supply with CFPs are seen in two different areas. On the one hand, the export market, particularly in Europe, is seen as a main driver; on the other, due to the growing standard of living and related awareness of environmental issues such as the origin of forest products, green products' potential can be seen in the domestic market (White, 2006).

10.4.4 Non-wood forest products certification

Forests produce many non-wood forest products (NWFPs) that play an important role for millions of people worldwide, providing food, fodder, and other products and materials. Their trade provides employment as well as income, particularly for rural people and especially women (FAO, 2004). The total value of world trade in NWFP is approximately \$13 billion.

While most NWFPs are used for subsistence and in support of small-scale, household-based enterprises, others provide raw materials for large-scale industrial processing for products such as foods and beverages, confectionery, flavourings, perfumes, medicines, paints and polishes. At least 150 NWFPs are of major significance in international trade. NWFPs may come from natural forests, forest plantations or agroforestry systems, and require special management and monitoring in order to ensure the long-term viability of species and to minimize adverse social and ecological impacts. NWFP harvesting is considered to have fewer negative impacts on forest ecosystems than timber harvesting and can provide an array of social and economic benefits. These benefits include carbon sequestration, watershed and soil conservation functions, diversification of income opportunities, and income benefits often yielded more quickly than timber. NWFP harvest and management is present in most forest management systems worldwide, for both commercial and subsistence purposes (Rainforest Alliance, 2006).

The positive development proves that after FSC permitted certification of NWFP management systems in 1998 and approved the first NWFP certification in Mexico in 1999, certification of NWFPs has steadily gained in importance. Many products such as palm hearts, maple syrup, medicinal plants, forest tea and venison have been certified in developing countries and many others are in process, including herbal teas, pine nuts, cork, rubber and brazil nuts.

In Europe, PEFC has recently issued a CoC certificate for pine oil (mugolio), derived from *Pinus mugo*, a

traditional forest product from northern Italy used to scent and purify air and for medical applications. The local tourism authorities also use this and other CFPs for internationally promoting the uniqueness of the region and its specialities, which shows additional benefit from a certification label.

10.4.5 "Avoided Deforestation", Degradation and Forest Management Certification

Approximately 13 million hectares of forests are lost every year due to deforestation activities. The net change in forest area from 2000 to 2005 is estimated at a loss of 7.3 million hectares per year (an area about the size of Sierra Leone or Panama), down from 8.9 million hectares per year from 1990 to 2000 (FAO, *Forest Resources Assessment 2005*, 2006).

Even though forest planting, landscape restoration and natural expansion of forests have significantly reduced the net loss of forest area, Africa, South America, Oceania, and North and Central America continued to have a net loss of forests. In Europe, the forest area continued to expand, although at a slower rate. Asia, which had a net loss in the 1990s, reported a net gain of forests during 2000 to 2005, primarily due to large-scale afforestation in China. This tendency again shows that deforestation mainly takes place in tropical forests while forest area is increasing in the North hemisphere.

These dimensions of forest loss indicate that deforestation is caused by conversion to agricultural land, fire, urban expansion, oil exploitation and mining. Forest degradation is due to legal and illegal logging, biofuel extraction and lack of forest management activities. Not only is biodiversity destroyed, but also the livelihoods of many of the world's poorest people. Deforestation is also a major source of greenhouse gas emissions. Hence, it has been proposed to include "Avoided Deforestation" in the Clean Development Mechanisms (CDMs) in the second commitment period of the Kyoto Protocol (post-2012), so that developing countries where deforestation has been taking place could be compensated for taking action to avoid deforestation, thus reducing carbon emissions (Fort and Iglesias, 2006).

In May 2006, participants in a workshop by the Joanneum Research Center and the Center for International Forestry Research (CIFOR) on avoided deforestation in Austria agreed that one major strategy to tackle deforestation and degradation is to ensure sustainable forest management, in addition to combating illegal logging, forest fires, forest degradation, and poverty in rural areas. An appropriate tool to confirm the application of sustainability criteria and indicators while combining them with economic and social topics might be third-party certification of the endangered forest area. Nevertheless, current arrangements under the United

Nations Framework Convention on Climate Change and the Kyoto Protocol were considered too cumbersome and costly to be applied by a large part of the business community, and are thus effective deterrents for participation in a scheme. More user-friendly schemes would be necessary; forest certification schemes might be one option.

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