



A Current Overview of Forest Products Certification

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Overview

To certify means to accredit a product or a practice for some special attribute, characteristic, feature or quality. In a global market it is difficult to have international policies for “well forest management practices”. If the policies cannot be created under command and control practices (laws and regulations) then the alternative option is to create a market value for the goods. In this case the goods are the wood with an extra attribute; this attribute is to have come from a forest with sound management. To be able to track the wood that comes from well-managed forests a tracking tool is needed. This tracking tool is better known as Chain of Custody (CoC). The CoC is an inventory control process in the wood manufacturing industry developed to track certified forest products from the forest through the supply chain to the final consumer.

Certification has been used as a mechanism to attempt to slow tropical deforestation (Cote 1999) and to reduce trading of wood products coming from illegal logging. Regardless of the reasons, environmental certification of forest products and forestry practices continues to proliferate worldwide.

The primary basis for certification is the need for consumers to be assured by neutral third-party organizations that forest product companies are employing sound practices that will ensure sustainable forest management (Ozanne and Vlosky 1997). In addition to reducing negative perceptions by consumers and the general public, it is believed that companies that prove to be environmentally responsible will benefit from certification by differentiating their products in the marketplace and thus acquiring a larger share of the market (Ozanne and Vlosky 1997).

Certification is supported by many non-governmental organizations (NGOs), governments, and companies. The total area of certified forests in the world was 219 million hectares in 2004. The majority of certified forests are in the United States, Europe, and Canada (Ingram 1998). The four main certification schemes in the world are: the Programme for Endorsement of Forest Certification (PEFC), the Forest Stewardship Council (FSC), the Sustainable Forestry Initiative (SFI), and the Canadian Standards Association (CSA). These four schemes certify almost 94 percent of the world’s certified forests.

Chain of Custody

Chain of Custody (CoC) is an inventory control process in the wood manufacturing industry developed to verify certified forest products. CoC works as a control system to manage critical components of the flow of materials. In the wood-based products industry, keeping the materials required to maintain the process flowing requires much coordination and planning. Managing non-certified-wood-products (NCWP) and certified wood products (CWP) in the same manufacturing process without mixing them adds even more complexity to inventory process control. Companies move to the CWP to gain market share. It has been shown that only large retail stores that have name recognition (for example Home Depot) are using certified product as one more attribute to differentiate their products (Conservation and Community Investment Forum 2002). “Certified forest product markets are driven at the business-to-business level, but not yet from final consumers” (FAO/UNECE, 2004).

One of the issues in certification is the lack of primary CWPs produced to sustain the supply chain. Wood products can be manufactured using different processes such as:

- Job Shops (custom wood products)
- Batch production (typical products include lumber, dimension, furniture, hardwood plywood, cabinets, and veneer)

- Repetitive production (millwork manufacturers)
- Continuous production (particleboard)

Since each of these processes has different environments, the strategies to manage CoC need to be addressed first with respect to each one of these processes and then to the products manufactured (Rudell and Stevens 1998). As an example of the complexity in the certified wood supply-chain management “it is estimated that over 80 percent of FSC certified lumber is “lost” on the way to the consumer, and ends up being sold as uncertified”(Conservation and Community Investment Forum 2002).

There are four main constraints that impact CWP introduction: market, material, capacity, and logistical constraints. Market uncertainty and demand for CWP make it difficult to introduce CWP’s and this uncertainty has generated market-planning strategies to minimize risk. The material constraint is linked to the supply of the primary CWP. There is not enough CWP to satisfy the demand of secondary CWP manufactures.

One solution to the supply problem is to enter into a strategic partnership with private forest owners who also work with CWP. The capacity constraint is reflected in factors that constrain the flow of materials through the manufacturing plant. To avoid this problem CWP inventory needs to be available in excess, although this last practice makes inventory costs rise. Logistical constraints are caused by the complexity in the management of the CWP through the plant. Planning the production, purchasing the material, and planning the inventory add to the cost of the final manufactured CWP.

To overcome all the costs and management problems and to give manufacturers an incentive to work with certified products, premium prices should be applied to the production of CWP’s (Rudell and Stevens 1998). On the other hand “if the forest owners, sawmiller, and manufacturer each get 10 percent premium for their handling of certified products, and the distributor and retailer tack on an additional 5 percent, then the street price of a US\$ 100 table will have inflated to US\$ 160, without having altered the physical appearance or performance one iota” (McIntyre n.d.). For certification to work CWP needs to be associated with a real value like risk reduction, cost reduction, and/or revenue enhancement (Conservation and Community Investment Forum 2002). "Chain-of-custody is a bottleneck in today’s certification markets, resulting in products produced from certified forests being sold without a label documenting their source" (UN/ECE 2002).

Major Certification Schemes

Forest Stewardship Council (FSC)

In 1992, during the Earth Summit of Rio de Janeiro, attendees were concerned about the pressure population growth was putting on natural resources. Sustainability became a concept that needed to be applied in the forest management field. As a result, foresters, environmentalists and sociologists came together to form the Forest Stewardship Council (FSC) (Washburn and Miller 2003).

FSC, created in 1993, is a not-for-profit, non-governmental, membership-based organization that sets international certification standards and accredits certifiers. It is comprised of a diverse coalition of local, national, and regional entities that work with FSC member certifiers to establish geospecific standards for forest management. The overall objective of FSC is to guarantee that all certifiers establish appropriate standards and fulfill established requirements in their certification efforts. The FSC has 52 million hectares (**Table 1**) of forests certified under their standards. Fifty-five percent of the forests certified under the FSC are

located in Sweden (20 percent), the United States (14 percent), Poland (12 percent), and Canada (7 percent). Forty-five percent of the members that hold a chain of custody under the FSC are in the United States (11 percent), United Kingdom (11 percent), Germany (9 percent), Poland (8 percent), and Japan (7 percent). The FSC has certified forests in Africa, Asia, Europe, North America, South America, and Oceania.

Table 1. Certified forest area and Chain of Custody distribution under the Forest Stewardship Council (2005)

Country	Certified forest area million (ha)	Percent
<i>Sweden</i>	<i>10.4</i>	<i>20%</i>
<i>United States</i>	<i>7.5</i>	<i>14%</i>
<i>Poland</i>	<i>6.2</i>	<i>12%</i>
<i>Canada</i>	<i>4.8</i>	<i>9%</i>
Russia	3.9	7%
Brazil	3.0	6%
Croatia	2.0	4%
Bolivia	1.9	4%
Latvia	1.7	3%
Rest of the world		22%
Total	52.9	100%
Country	Chain of Custody (#)	Percent
<i>United States of America</i>	<i>435</i>	<i>11%</i>
<i>United Kingdom</i>	<i>401</i>	<i>11%</i>
<i>Germany</i>	<i>328</i>	<i>9%</i>
<i>Poland</i>	<i>311</i>	<i>8%</i>
<i>Japan</i>	<i>251</i>	<i>7%</i>
Netherlands	239	6%
Switzerland	215	6%
Brazil	177	5%
Canada	118	3%
Rest of the world		35%
Total	3,819	100%

Source: FSC 2005.

FSC certifies based on 10 principles that include social and environmental criteria. FSC certified products enter the marketplace with a credential of being a social and environmentally responsible product. Producers (certified forests) and manufacturers (chain of custody - CoC) both need to go through the certifying process. The process works through a third party certifier. FSC specifies the standards, an accredited certifier applies the standards of the FSC in the field, and the owner of the land receives the accredited certification of FSC in their products. By 2003, forestland in 57 countries was certified and 62 countries had chain of custody with the FSC standards (Washburn and Miller 2003).

Forest products can follow a long process from the forest before they reach the consumer. During the process, the raw materials need to be held to the certification standards. To claim that a solid wood product is certified, the product must contain at least 70 percent of FSC-certified wood (Anderson and Hansen 2003, FSC 2003(a)).

The FSC Principles

“Principle #1: Compliance with laws and FSC Principles

Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

Principle #2: Tenure and use rights and responsibilities

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

Principle #3: Indigenous peoples' rights

The legal and customary rights of indigenous peoples to own, use and lands, territories, and resources shall be recognized and respected.

Principle #4: Community relations and worker's rights

Forest management operations shall maintain or enhance the long-term social and economic wellbeing of forest workers and local communities.

Principle #5: Benefits from the forest

Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

Principle #6: Environmental impact

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

Principle #7: Management plan

A management plan – appropriate to the scale and intensity of the operations – shall be written, implemented, and kept up-to-date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

Principle #8: Monitoring and assessment

Monitoring shall be conducted – appropriate to the scale and intensity of forest management – to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

Principle #9: Maintenance of high conservation value forests

Management activities in high conservation value forests shall maintain or enhance the attributes that define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

Principle #10: Plantations

Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests” (FSC 2004).

Sustainable Forest Initiative (SFI)

Adopted by the American Forest & Paper Association (AF&PA) in October 1994 and officially launched in 1995, The Sustainable Forestry Initiative® (SFI) program is an exacting standard of environmental principles, objectives, and performance measures that integrate the perpetual growing and harvesting of trees with the protection of wildlife, plants, soil and water quality and a wide range of other conservation goals. An independent External Review Panel, comprised of representatives from the environmental, professional, conservation, academic, and public sectors reviews the program and advises AF&PA on its progress. Through the SFISM program, members of the American Forest & Paper Association are revolutionizing the way that

private forests are managed in the U.S. Sixteen companies have been expelled from the Association for failure to uphold the standard set by the SFISM program. Currently it is the major certification scheme in the U.S. with 55 million hectares of forests certified under its scheme (SFI 2005, Wallinger 2003, Fletcher et al. 2002).

Sustainable Forestry Board

The Sustainable Forestry Board was chartered as an independent body in July of 2000 to oversee development and continuous improvement of the Sustainable Forestry Initiative® (SFI) Program Standard, associated certification processes and procedures, and program quality control mechanisms.

External Review Panel (ERP)

A distinguished group of 18 independent experts representing conservation, environmental, professional, academic, and public organizations comprise the Independent External Review Panel. The mission of the External Review Panel is to provide a framework to conduct an independent review of the SFISM program and to ensure that the Annual Report fairly states the status of SFISM program implementation. The volunteer Panel provides external oversight with their independent review of the current SFISM program while seeking steady improvements in sustainable forestry practices. While some members of the panel do make field visits to member companies and observe their on-the-ground practices, it is not a charge of the panel to verify practices on the ground, and the panel does not review individual company data (SFI 2004).

The SFI Principles

“Principle #1: Sustainable forestry

To practice sustainable forestry is to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing and harvesting of trees for useful products with the conservation of soil, air and water quality, biological diversity, wildlife and aquatic habitat, recreation and aesthetics.

Principle #2: Responsible practices

To use in forests, and promote among other forest landowners, sustainable forestry practices that are economically, environmentally, and socially responsible.

Principle #3: Forest health and productivity

To protect forests from wildfire, pests, diseases and other damaging agents to maintain and improve long-term forest health and productivity.

Principle #4: Protecting special sites

To manage forest and lands of special significance (e.g., biologically, geologically, culturally or historically significant) in a manner that takes into account their unique qualities.

Principle #5: Legal compliance

To comply with applicable federal, state or local forestry and related environmental laws and regulations.

Principle #6: Continual improvement

To continually improve the practice of forest management and also to monitor, measure, and report performance in achieving the commitment to sustainable forestry” (SFI 2005).

Program of Endorsement of Forest Certification (PEFC)

The Program of Endorsement of Forest Certification was created in 1999 first as Pan European Forest Certification program by the European forest products industry as an alternative for FSC certification. Initially it worked as an umbrella for the forest certification systems in mostly European countries. From 1999 to today the number of member countries has risen to 30

as of March 2005. It became an international umbrella for non-European countries such as Australia, Chile, and Canada, changing its name in 2003 to Program of Endorsement of Forest Certification. The PEFC works under principles of sustainability, credibility, accountability, and adaptability. The PEFC is the largest certification scheme in the world and certifies logging activities on 123 million hectares (**Table 2**) of forests certified under their standards. Seventy-seven percent of the forests certified under the PEFC are located in Canada (52 percent), Finland (18 percent), and Norway (7 percent). Sixty-seven percent of the members that hold a chain of custody under the PEFC are in Finland (31 percent), France (23 percent), and Austria (13 percent). The PEFC has certified forest in Africa, Asia, Europe, North America, South America, and Oceania.

The PEFC Principles

“Principle #1: Sustainability

- Benefits the biodiversity of nature and the environment.
- Promotes the economically viable, environmentally appropriate and socially beneficial management of forests.
- Provides independent certified proof of the sustainable management of forests.
- Provides continuous supplies of wood products from millions of hectares of sustainable managed certified sources.

Principle #2: Credibility

- Develops national forest management certification standards and schemes, using multi-stakeholder processes for the protection of forests, which have been signed by up to 37 nations in Europe, and other inter-governmental processes for sustainable forest management around the world.
- Uses internationally recognized accreditation and certification processes to ensure independence of control, standard setting and delivery of sustainable forest management.
- Is supported by 30 independent certification schemes and their stakeholders, including woodland owners, industry, and environmental and social interests amongst others.

Principle #3: Accountability

- Regulate independent certified controls - from the tree in the forest to the final product.
- To reassure the customer that wood-based product can be traced back to sustainable managed forests.

Principle #4: Adaptability

- Facilitates active involvement of all forests and enterprises regardless of size. This includes family-owned forests, small to medium sized forest enterprises as well as multinational corporations.
- Accommodates and incorporates the global diversity of forest types, cultural heritage, ownership structures and management objectives” (PEFC 2005 (a)).

Table 2. Certified forest area and Chain of Custody distribution under the Program of Endorsement of Forest Certification (2005)

Country	Certified forest area million (ha)	Percent
<i>Canada</i>	63.8	52%
<i>Finland</i>	22.4	18%
<i>Norway</i>	9.2	7%
Germany	7.0	6%
Sweden	6.6	5%
Austria	3.9	3%
France	3.7	3%
Czech Republic	1.9	2%
Austria	1.9	2%
Rest of the word		2%
	123.3	100%
Country	Chain of Custody (#)	Percent
<i>Finland</i>	719	31%
<i>France</i>	520	23%
<i>Austria</i>	290	13%
Chile	203	9%
Switzerland	156	7%
UK	88	4%
Denmark	85	4%
Sweden	64	3%
Canada	50	2%
Rest of the word		5%
	2,285	100%

Source: PEFC 2005.

Canadian Standard Association (CSA)

The Canadian Standard Association (CSA), Sustainable Forest Management Program (CAN/CSA Z809) is a not-for-profit organization engaged in the development of independent standards. CSA developed a Sustainable Forest Management (SFM) standard modeled on the ISO environmental management systems standard ISO 14000 (Forest World Group, n.d., Canadian forestry Certification Commission n.d.). In 1996 CSA, along with the Canadian government, launched Canada's National Standard for Sustainable Forest Management (CAN/CSA Z809). This standard was developed through the collaboration of various stakeholders including government, environmental groups, forest industry, and academic interests. The fact that the forest industry was taken into account in the development of the CSA shows the great relationship that the Canadian industry has with the government (Cashore et al. 2003). "It is based on an internationally approved set of criteria and indicators for sustainable forest management and modified by the Canadian Council of Forest Ministers, representing each

Canadian province” (Weyerhaeuser 2002). In 2003 a revised version of the Z809 standard was published along with requirements for the implementation of a chain of custody for forest products originating from areas certified under standard Z809 (CSA 2002). By 2004 the CSA had 47.5 million hectares of forests certified.

The CSA Principles

“Principle #1: Conservation of biological diversity

Conserve biological diversity by maintaining integrity, function, and diversity of living organisms and the complexes of which they are a part.

Principle #2: Maintenance and enhancement of forest ecosystem condition and productivity

Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.

Principle #3: Conservation of soil and water resources

The parties who are affected or interested participate voluntarily.

Principle #4: Forest ecosystem contributions to global ecological cycles

Maintain forest conditions and management activities that contribute to the health of global ecological cycles.

Principle #5: Multiple benefits to society

Sustain flows of forest benefits for current and future generations by providing multiple goods and services.

Principle #6: Accepting society’s responsibility for sustainable development

Society’s responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made” (CSA 2002).

Comparison of Major Certification Schemes

The major schemes in the world were developed and implemented in the same decade as a result of a global concern to address sustainability in the forest sector. The Sustainable Forest Initiative (SFI) has certified forest areas in the U.S. and Canada. The FSC gave incentives to the Canadian industry for the development of the Canadian Standard Association (CSA) so that Canada could stay only with its national certification system (Cashore et al. 2003). The SFI development was very similar to the CSA; both were developed by members of the forest products industry. The Forest Stewardship Council (FSC) and the Program for Endorsement of Forest Certification (PEFC) have a global scope and are broadly used around the world. FSC and PEFC have certified forests in five regions: Africa, Asia, Europe, North America, South America, and Oceania. In May of 2005 the CSA was recognized under the PEFC umbrella (PEFC 2005), turning the PEFC into the largest certification scheme by area around the world. The FSC is typically applied in tropical countries, and FSC principles have been used as a guideline to improve developing countries’ forest management laws. The FSC is also broadly used in the U.S. and Canada. **Table 3** shows that the most widely adopted programs are PEFC and SFI. ”Despite cooperation between some certification schemes, lack of mutual recognition may confuse consumers” because they cannot recognize the difference among schemes (FAO/UNECE 2004).

Principles Applied by Major Schemes

For the certification system to work there are many steps that need to go hand in hand. First, the certification scheme sets the criteria that define sustainable forest management practices. Once the guidelines are written and a forest landowner/company wants to become certified under a certain scheme, a third party goes to the field and conducts an audit to see if the criteria are met. If not, the third part recommends the necessary improvements to become certified. When the landowner/company has improved its practices and has passed the third party

audit, the forest land becomes certified for a specified period of time (for example: 5 years for FSC). After the initial certification time has passed, if the landowner/company wants to keep the certification the third party needs to verify that the standards have been maintained and recertify the forest management practices. These additional steps add cost of production throughout the supply chain.

Table 3. Major forest certification schemes, area certified and their scope (2005)

Scheme	Area Certified [Millions of hectares]	Scope
PEFC	55.0	International. Umbrella for national schemes. Primarily focuses on forests in the European Union. Currently expanding to Australia, Brazil, Canada, Chile, Malaysia and the U.S.
SFI	55.0	Primarily focused on industrial forests in the United States and Canada.
FSC	52.0	International. Umbrella for national schemes. Used by all types of forest ownership around the world.
CSA	47.4	Canadian Standards Association; primary focused on industrial forests in Canada.
TOTAL	209.4	

Sources: Area figures for FSC, PEFC, SFI, and CSA come from their web pages (Accessed on 2005).

The foundations and main principles of all the certification schemes are to address sustainable forest management practices within a specific scope; meaning there are minimum criteria that need to be achieved to meet a principle. One of the differences between the FSC and other schemes is that the FSC has one principle that deals with indigenous people. The SFI principles address growing trees in a way that ensures protection of the forest environment (soils, wildlife, air, water quality, and plants) (Ingram 1998). The FSC principles apply to tropical, boreal and temperate forests. However, the FSC encourages taking into account the economical, social and environmental reality of a place to design a more proper management plan (GTZ 1998). The PEFC criteria encourage other less known certification schemes to meet their standards so that they can become part of the PEFC umbrella. To become certified under the FSC and PEFC is voluntary. The CSA and the SFI demand that their members be certified under their scheme. For the CoC of the FSC and PEFC there is a requirement that at least 70 percent of a product must come from certified wood in order to use the label (**Table 4**).

Eco-labeling is applied to products that meet specific environmental standards with the purpose of informing the consumer (Greenbiz.com/ Ecolabeling 2004). In the forest products category the logo that the third party certifier (e.g. Smartwood) stamps when the producer meets the standards of the first party certifier (e.g. FSC) is the eco-label (**Figure 1**). The FSC and the PEFC have an eco-label, but the SFI and CSA do not have one. The CSA, PEFC, and FSC use a third party to gain certification under their standards (**Table 5**).

Table 4. Selected characteristics of major forest certification schemes

	FSC	SFI	CSA	PEFC
Basis for Company Participation	Voluntary	Required for AF&PA membership. Voluntary for third-party certification and non-member licensees.	Required for CSA members.	Voluntary
Public reporting	Public disclosure of certification report and management plan is required for forest management companies. Standards and other program information freely available.	If the participant desires to publicly state it has an SFI certification, then it is required to disclose a summary certification report. Collective performance trends are reported annually by AF&PA. Standards and other program information freely available.		Public disclosure of certification report is required. Standards and other program information available from national programs.
On-product label and chain of custody guidelines	Yes. Minimum threshold varies with product. 70 percent for solid wood.	Yes, for third-party certifications only. Minimum threshold is 66 percent.		Yes. Minimum threshold is 70 percent.
Number of participants	3,311 certified companies (holding 3866 certificates) in 73 countries. 630 are Forest Management certificates and 3,233 are Chain of Custody certificates.	130 AF&PA members. 80 additional organizations outside of AF&PA are licensed under program.		PEFC has in its membership 30 independent national forest certification schemes.

Source: Forest Certification Resource Center (n.d.) and PEFC (2004).



Figure 1. FSC and Smartwood logos

Table 51. Basic elements of example certification schemes

Scheme	Led by	Level	Application	Eco-label
SFI	American Forest & Paper Association	2 nd party	United States	No
CSA	Canadian Standards Association	3 rd party audited, systems-based	Canada	No
FSC	Primarily environmental, non-governmental organizations	3 rd party, performances-based	International	Yes
PEFC	Primarily environmental, non-governmental organizations	3 rd party, performances-based	International	Yes

Source: Forest Products Annual Market Review 1997 -1998

Certified Forest Distributions among Regions

Forest certification has been extensively applied in the developed regions of North America and the EU. The majority of certified forests are in the United States, Europe, and Canada (Ingram 1998). In the U.S. the Forest and Paper Association decided that all its members should be certified under SFI management practices. “The US-based SFI and the Canadian CSA scheme are largely applied by the larger industrial land owners or concession holders” (Eba’a Atyi 2002). The forest industry in developed regions is better organized and has a larger budget allocated for responsible management practices. The EU and similar regions have been using their forest resources for a longer time than other developed countries. They have learned through time and experience that establishing sustainable practices is necessary to maintain their forest resources. Developed regions have more critical consumers who have the power to ask for products produced under social and environmentally responsible practices. **Table 6** shows that the two regions where the majority of the forests under the major certification schemes are

located are Europe and North America. These two areas account for 96 percent of the total certified forests in the world.

Table 6. Certified forest areas classified by selected regions and certification standards (million of hectares)

Forest Certification Standard (million hectares)						
Regions	PEFC	FSC	SFI	CSA	Total	%
Europe	54.8	26.8			81.6	37%
North America		12.3	55.0	63.8	131.1	59%
South America		4.9			4.9	2%
Africa		1.6			1.6	1%
Oceania	1.9				1.9	1%
Total					221.1	100%

Sources: Canadian Sustainable Forestry Certification Coalition (n.d.), FSC (2005), Forest Certification Resource Center (2004), and PEFC (2005).

Summary

Forest certification appeared on the scene in the mid 1990's to address sustainability in the forest sector, to reduce tropical deforestation, and to curb illegal logging. There are four main forest certifications in the world: the Sustainable Forest Initiative (SFI), the Forest Stewardship Council (FSC), the Programme for Endorsement of Forest Certification (PEFC), and the Canadian Standard Association (CSA). The four schemes hold 96 percent of the world's certified forest area. Ninety-eight percent of that area is located in developed regions (U.S., Europe, and Canada).

The overall goal of all the certification schemes is to address sustainable forest management practices. Each scheme sets the criteria that define sustainable forest management practices. Usually an independent third party audits for verification that the respective criteria are being applied by the landowners/companies who want to become certified. There are two ways to become certified; one is through forest management practices and the other is through Chain of Custody (CoC). CoC is an inventory control process in the wood manufacturing industry developed to control certified forest products through the supply chain to the final customer. CoC is by no means unique to the forest products industry. It is a widely used practice to track the transfer of things from one place to another.

To manage non-certified wood products with certified wood products in the same manufacturing plant is not an easy process. As an example of the complexity in the certified wood supply chain management "it is estimated that over 80 percent of FSC certified lumber is "lost" on the way to the consumer, and ends up being sold as uncertified"(Conservation and Community Investment Forum 2002).

Currently "certified forest products markets are driven at the business-to-business level, but not yet from final consumers" (FAO/UNECE, 2004). Large retailers such as Lowe's and Home Depot are using certification as one more attribute to differentiate their products. Consumers may find certification difficult to understand because of the various certification schemes. They are more concerned in identifying a unique logo on the products purchased rather than the background of the certification.

“One of forest certification’s most relevant contributions to positive policy developments has been the induction of a new culture of multi-stakeholder processes that is characterized by an increased awareness of Sustainable Forest Management” (Segura 2002).

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