
PINCHOT INSTITUTE
FOR CONSERVATION

**Understanding Forest Certification:
Answers to Key Questions**

by

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Answers to questions most asked by:

- ▶ *Consumers*
- ▶ *Consulting Foresters*
- ▶ *Loggers*
- ▶ *Public Land Managers*
- ▶ *Conservation Organizations*
- ▶ *Wood Products Manufacturers*
- ▶ *Brokers and Wholesalers*

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Foreword

Independent, third-party certification has become an important mechanism for assuring consumers that the wood products they buy are from well-managed forests – and that by their purchase they are contributing not to forest degradation, but to the sustainable management of a renewable natural resource. The first certification programs were developed by the Forest Stewardship Council (FSC), an international organization comprised of representatives of the forest products industry and the conservation community. FSC certification is based upon a field assessment of on-the-ground performance relative to FSC's standards of ecologically, socially, and environmentally sensitive forestry. Certification of a forestry enterprise permits the use of FSC's label, to consumers a sign of responsible forest management.

More recently, other systems have developed to encourage improved forest stewardship. The American Forest and Paper Association's Sustainable Forestry Initiative (SFI)SM sets high standards for forest management that protects water quality, wildlife habitat, and other forest values while meeting society's needs for fiber and building materials from renewable sources. Further, SFI calls for continuous improvement over time, and relies upon an Expert Review Panel to provide independent oversight and advice. Other programs developed by the American Tree Farm Association and the National Woodland Owners Association are described in detail in this guidebook and its appendices.

Forest certification has now gained widespread interest from forest products companies, conservationists, consumers, land managers, consulting foresters, and loggers, all of whom have their own questions about the certification process, its costs, and its benefits. In 1998, the Pinchot Institute conducted an extensive set of interviews nationwide with representatives of these segments of the forestry and conservation community to determine what questions come up most frequently. Over 100 in-depth interviews were conducted with individuals interested in various aspects of forestry and forest certification, at locations across the country.

One thing that became abundantly clear in the interviews was the need for a simple, easy-to-use guide to address the most frequently asked questions about certification. This guidebook is intended to address that need by providing answers to the questions identified most often by respondents as a whole, and the questions most often asked within each of the "audiences" mentioned above.

Recognizing that FSC certification is now only one of several programs that people are hearing about, this guidebook also suggests questions to ask to help determine whether certification is right for you, and if so which program might be best suited to your needs. Currently, FSC certification is the only program providing for performance-based certification for the purpose of obtaining and utilizing a consumer label. Since most of the questions on certification pertained to this type of program, most of the discussion in this guidebook relates primarily to FSC certification. This is a matter of practicality, rather than an endorsement of one program over another. SFI and other programs are evolving rapidly, however, and it probably will not be long before an update of this guidebook will be in order.

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Answers to the Most-Asked General Questions Regarding Forest Certification

1. *What is certification and what does it mean?*

Forest Certification is a voluntary tool designed to document and reward sustainable forest management practices. It is similar to organic farm certification (which includes the distribution of specially labeled "certified organically-grown" foods that are displayed separately in the grocery). As with certified organic farms, wood from certified forests is specially labeled with a stamp that declares "*this product is made from wood that has been harvested from a well-managed forest.*"

What certification means:

Certification is like a "Good Housekeeping" seal of approval, assuring consumers that they are not contributing to forest degradation when they buy products made from certified wood. This does not mean "locking up" the forests. It may mean adopting forestry practices that include setting aside areas within a managed forest for habitat or soil protection. These set-aside areas are based on the owner's goals and sound "*landscape*" forestry practices. *Landscape* forestry simply means managing forests in a manner that takes into account not only what is happening on your land, but also on other lands which surround your forest ... looking at the full landscape to understand forest health.

There are four important tenets of certification which provide credibility to retailers and consumers:

- ***Third-party assessment*** of forest management practices: Third-party means that an operation has been reviewed by an *outside* (independent) assessment team, rather than by the company itself (**first-party assessment**), or by another interested party, such as a wood purchaser (**second-party assessment**).
- ***Performance-based assessment*** of forest management practices: This means that there is on-site documentation that a forestland manager is implementing sustainable forest management plans in the forest. This is in contrast to **process-based** evaluations, where the forest management plan (on paper) is evaluated, but no confirmation of the management plan implementation in the forest is conducted.
- ***Third-party annual auditing*** of forest management practices.
- ***Third-part chain-of-custody certification*** of wood products manufacturing operations. Certified logs coming from the forest are tracked through the production process in order to ensure that a final wood product has come from certified forests, even though the wood product producer may work with both certified and non-certified logs and lumber.

Certification proves to a consumer that their purchase supports a healthy forest:

- where landowners do not cut more than they are growing
- where aquatic habitat and water quality are protected

- where habitat is maintained for a diversity of animal and plant species
- where local communities and native peoples who rely on the forest for their livelihood can be sustained, and have access to hunting, fishing, medicinal herbs, and sacred areas.

Certified wood is like any other wood:

- Except that it is marketed to environmentally conscious retailers and consumers in domestic and international markets;
- It is manufactured in all forms, from low volume high-end *niche* products like hand-crafted furniture; *value-added* products such as flooring, doors, and wooden windows; and even high volume *commodity* products like 2x4 studs and structural plywood.

2. Who are the certifiers and who endorses them as credible?

Within the U.S., there are organizations that offer verification of environmentally-sensitive forest management practices. These include the **Sustainable Forestry Initiative (SFI)**, the **American Tree Farm** program, the **Green Tag** program, and the **Forest Stewardship Council (FSC)** program. These programs vary in the standards of forest management that must be adhered to, costs of verification, and benefits associated with participation in the program.

Sustainable Forestry Initiative (SFI)SM:

SFI is a program developed in 1994 by the American Forest & Paper Association (AF&PA). It is primarily focused on larger industrial forestland owners who are AF&PA members, although it is in the process of developing a license program for non-members as well.

SFI certification declares: " this forest is managed using modern science to meet the needs of humanity for essential wood and paper products while protecting and enhancing other forest resource values."

- To date SFI assessments have been primarily **process-based**, requiring member companies to pledge adherence to SFI forest management guidelines. Through its Expert Review Panel, SFI recently began a program of monitoring management consistent with the SFI guidelines and **performance-based** desires of the landowner.
- Currently, AF&PA offers primarily **first-party** or **second-party** verification of management practices. Recently, AF&PA has recognized third-party verification as an option for its member companies. Specific criteria and standards to be used in these third-party assessments, as well as qualifications for assessors, have recently been developed.

SFI has recently initiated a new **SFI Licensee** program, whereby non-AF&PA members can participate in the SFI program. To become a licensee, a forestland manager must a) agree to the SFI principles, b) sign a licensee agreement, and c) pay a licensee fee. No on-site evaluation of forest management practices is required.

SFI certification currently is not recognized internationally and does not offer wood product producers chain-of-custody certification, annual auditing, or a consumer product label. Wood products made from SFI-assessed lands are, therefore, currently not recognized in the marketplace.

For more information on the SFI program, see Appendix A of this guide.

The American Tree Farm System (ATF):

The American Tree Farm System, a program of the American Forest Foundation, is a nationwide network of forestry professionals and landowners that is focused on private woodland owners with 10 or more acres.

American Tree Farm (ATF) certification declares: " this owner is committed to sound, sustainable forestry and productive forestland that has clean water, good wildlife habitat, and provides recreational opportunities and benefits for people, wildlife, and the environment."

- The ATF system is primarily a **second-party assessment** program. The landowner develops his/her own management plan, then has another member of the American Tree Farm program review that plan and their practices in the field.
- The ATF system is mostly *process-based*. No independent set of standards is used and no annual audits are required.

Like the SFI program, the ATF program is not recognized internationally and does not offer wood product producers chain-of-custody certification, annual auditing, or a product label. Wood products made from ATF-assessed lands are not recognized in the marketplace.

For more information on the ATF program, see Appendix B of this guide.

The Green Tag Program:

The Green Tag program was recently developed by the National Woodland Owners Association and is focused primarily on non-industrial private forestlands.

Green Tag certification declares: " this wood is from a sustainably managed forest."

- The Green Tag program is a hybrid of *process-based* and *performance-based* certification programs. The forest management plan is based on the owner's goals in consultation with a professional forester, and the plan is verified by Green Tag staff with on-the-ground audits every 3 to 5 years.
- It is a *second-party* program because an association develops and sets forest plan standards for it members, and then certifies them as long as they manage according to the forest plan.

Like SFI and ATF programs, the Green Tag program is not recognized internationally and has no annual audit requirements, but it does offer chain-of custody assessment and a product label (tag) which can be used in the marketplace. Currently, there are no Green Tag wood products in the marketplace.

For more information on the Green Tag Program, see Appendix C of this guide.

Forest Stewardship Council (FSC) Program:

The FSC was initiated in 1993 by an international retail community wishing to develop a credible forest management certification program that could win the confidence of consumers. The international FSC membership, equally comprised of economic, social, and environmental interests has ten (10) general principles and criteria that guide forest management assessments worldwide. Within the framework of these principles and criteria, *regional science- and value-based standards* for sustainable forest management are developed and used for all FSC certifications.

- Verification of management practices is always conducted by an *outside (third-party)* assessment team. FSC chain-of-custody assessments are also required in order to move certified wood through wholesalers and other intermediate markets into certified wood product markets.
- FSC certification requires a *performance-based* assessment, ensuring that sustainable forest management practices are actually being applied in the forest. Annual in-field verification audits are required.
- The FSC certification program is *recognized in both domestic and international markets for a variety of hardwood and softwood products*. Product labels are provided to certified wood product manufacturers. These labels ensure the retailer and consumer that the wood product is made from wood which comes from an independently-certified well-managed forest.

FSC certification is endorsed by national and international forest products companies, the forestry profession, environmental organizations, indigenous peoples' organizations, and community forestry groups from 25 countries throughout the world.

Currently, only two organizations in the U.S. are recognized by the FSC to conduct third-party assessments and issue contracts. These organizations are annually audited themselves, by FSC, in order to be recognized as FSC certifiers:

- * **Smartwood:** A not-for-profit organization headquartered at Richmond, Vermont, with partners in several regions throughout the US
- * **Scientific Certification Systems:** A for-profit organization headquartered at Oakland, California and active throughout the US.

For more information on FSC Certification, see Appendix D of this guide.

3. What is the perspective of FSC certification?

FSC certification is designed to promote new types of businesses and business practices, and to promote new types of commercial wood utilization in local economies. Instead of shipping out raw material to compete in world markets, certification supports:

- the development of local value-added processing;
- a range of diverse small-scale enterprises;
- the recapture of waste streams;
- niche marketing;
- finding the "highest and best use" for the raw material;
- ... and other forms of economic development that should occur when a forest resource is managed as a diverse plant community.

Does FSC certification have environmental objectives?

FSC certification has an environmental focus not common to traditional forestry – it means less than maximum timber production and more complex management to give greater consideration to environmental concerns. Yet many environmental groups have been critical of certification because of its emphasis on market-driven production of wood products.

Does FSC certification have social objectives?

FSC certification has a social focus that respects workers' rights and the activities of forest dependent communities, such as wildcrafting, hunting, and traditional medicines. While these social objectives may pose concerns for operations in other countries, *certification requirements are consistent with current labor practices and land use laws in the United States.*

Does FSC certification respect private property rights?

FSC certification is a voluntary, market-driven tool for landowners. The landowner chooses and pays for certification at his or her own expense. It is a strictly private choice by the landowner, not a government regulation.

Does FSC certification allow public input on forest practices?

Public input occurs in regional standards working groups that are convening across the U.S. These groups define standards for their particular region. They are also required to include multiple interests and have "*fair and democratic decision-making procedures, adequate public participation and representation by diverse stakeholders, and a clear and transparent grievance procedure.*" In addition, the public has input when certifiers interview local and regional stakeholders for each specific forest assessment conducted.

4. *How does certification work?*

Landowners, and the professionals who serve them (foresters and loggers), practice a kind of forestry that is considered sustainable because it is sensitive to the long-term ecological needs of the forest. These practices are checked annually by the certifiers, who also measure indicators of forest health, such as soil quality, water quality, and biodiversity.

From the forest floor to the living room floor

Wood that comes from FSC-certified forests must be tracked through the production process in order to assure buyers that they are purchasing a product made from certified wood. This process is known as *chain-of-custody* (COC).

FSC forest certifications and COC certifications last for five years, and annual audits are conducted on both types of operations by the certifier.

5. *Are there markets for FSC-certified wood products? Will consumers need to pay more for certified wood products?*

There are markets for FSC-certified wood products:

- **Consumers are buying certified wood products:** *In 1998, demand from buyers' groups for certified wood products was estimated at 9 million cubic meters of round wood equivalents. Total volume of certified lumber traded in Europe alone was estimated to be around 2 million cubic meters.*

Today, consumers in the U.S. and Europe can buy a wide variety of certified hardwood and softwood wood products including commodity lumber, furniture, flooring, paneling, doors, casegoods and shelving, toys, guitars, paper products, even certified charcoal.

- **Retailers are requesting certified wood products:** Major retailers in the U.S. and Europe are actively seeking certified wood products to offer on their shelves. Home Depot in the U.S., and B&Q and Sainsbury in the U.K. are examples of major home center stores seeking a large variety of certified hardwood and softwood products to offer their customers. B&Q claims they will carry no wood products on their shelves that are not FSC-certified by the year 2000.
- **Major wood product users are requesting certified wood:** The Gap, Starbucks, Nike, Gibson Guitars, and Turner Construction (the largest home builder in the U.S.) are all examples of wood product users seeking certified wood for their building and product needs. Universities across the U.S. are now specifying certified wood for their building construction and furniture purchasing needs. Even municipal governments across the U.S. are requesting certified wood in their construction contracts.
- **Market opportunities are being created through public forestland certifications:** In 1998, almost 3 million acres of state and county forestlands in the U.S. were FSC-certified,

creating opportunities for manufacturers to access consolidated volumes of certified wood supplies to respond to market demand for certified wood products.

Cost of certified products: For the consumer, some certified wood products may cost more (between 3%-5%) at the retail level over non-certified equivalents. This means the consumer might pay between \$.60 cents to \$1.00 more on a \$20 certified wood product purchase. Thus far, the cost of offering a certified wood product seems less a concern to the consumer than to the retailer. Recent studies in the U.S. suggest that some retailers are willing to pay more for certified wood products, and absorb a portion or all of that added cost, in order to offer a certified product to their customers. Retailers benefit by differentiating themselves from their competitors when offering certified wood products to their customers; their customers benefit by being able to purchase certified wood products at competitive prices.

Ease of access to certified products: Although there is a variety of certified wood products on the market today (from fine hand-crafted cherry rocking chairs to low cost items such as pine book shelving), lack of large forest products industry involvement in FSC certification has hampered the ability to bring larger volumes of certified forests on line for product manufacturing.

Studies have shown that *people will choose environmentally-friendly wood over other wood at the same price when given a choice*, and many wood products businesses know this. However:

- Certified wood is not yet widely available because there are not enough certified forests yet to meet the demand.
- Certified wood is not yet made into a consistent variety of products one typically finds at a lumber yard or a furniture retail store.

Expected Trends:

- **A growing list of major U.S. wood product users** specifying certified wood for their product needs.
- **Increased timber volume from certified public forestlands:** The public can expect to see increased third-party certification of municipal, county, and state forestlands and watersheds. This has the potential to add significant volumes of certified wood into the product development stream.
- **Increased certified wood supply from Canada:** In Canada, major wood product producers and forestland owners are selecting to invest in FSC certification. In 1998, the J.D. Irving Company in eastern Canada became FSC certified. Macmillan Bloedel in western Canada announced in 1999 that they would be changing their management operations to meet certification requirements, including FSC certification.

6. *What does FSC certification mean in the forest, and for forests in general?*

In the forest:

- The landowner, or the resource professional contracted by the landowner, writes a detailed management plan for his/her forest.
- The forest practices are initially assessed against FSC standards (both on the ground and in planning documentation), then checked annually, on the ground, to verify compliance with the forest plan. Every five years, the plan is reviewed for changes or improvements which may be needed.
- Harvests are limited to those that can be sustained by the land and are documented in the management plan; an owner that cuts ahead of schedule or cuts the wrong species, to meet market demand, will lose certification and access to those markets.
- Harvesting of trees and vegetation along streams and rivers is not allowed because of the need to maintain wildlife habitat, prevent erosion, and maintain water quality.
- Harvesting is not allowed in special and unique areas with rare plants and animals;
- After a harvest, the land may be restored in a variety of ways, depending on the site. The land may be allowed to naturally regenerate or it may be replanted in a mix of native tree species conducive to restoring or maintaining the health of the forest in the region.

For forests in general:

- **Environmentally-sensitive forestry:** FSC certified forestry limits harvest impacts on soil, water quality, wildlife, and habitat. Leading national and international environmental groups such as the World Wildlife Fund, The Audubon Society, and The National Wildlife Federation actively support FSC certification and those who invest in FSC certification.
- **Improved public opinion toward forestry:** FSC certification is one of many new campaigns that has been initiated to address negative public opinion about forest practices. Although other programs exist, such as SFI, ATF, and Green Tag, which encourage sustainable forest management practices, third-party performance-based certification is not required, as it is with the FSC program. Public forestland managers have recognized the importance of independent, third-party review in reassuring citizens that their forests are being managed to the highest standards of sustainable forest management. At the urging of their Expert Review Panel, AF & PA is moving forward in making third-party verification a more prominent feature of the SFI program.

For the forest products industries:

- **Improve industrial forest practices:** Several timber companies and wood product producers have invested in FSC-certification:

Collins Pine - (OR, CA)
Kane Hardwoods - (PA)
Seven Islands Land Company - (ME)
Menominee Tribal Enterprises - (WI)
Keweenaw Land Association - (MI)
Big Creek Lumber Co. - (CA)
Colonial Craft - (WI, MN)
Columbia Forest Products (throughout U.S.)
States Industries (OR)

- **Expand sustainable forestry practices among the forestry professions:** Loggers and foresters are being trained in FSC certified forest practices. A recent study of loggers' attitudes revealed their strong interest in any program that financially rewards the landowner for the extra costs they incur when practicing good forestry.
- **Increase awareness among wood products manufacturers:** Surveys of sawmills and wood products manufacturers indicate the industry is very aware of this effort. Many say they can "*see it coming*", but many are waiting for proof of the market demand first, before taking steps to ensure their wood supply is certified.
- **Increase awareness among retailers and consumers:** More and more, a wide variety of catalogues and retailers are advertising how their products are from "*sustainably-grown plantations*" or "*harvested with sensitivity to the environment*" or "*made from recycled materials*." This is an indication of the growing awareness of producers to consumers' interests in environmentally responsible products. But it also points up the need for certification programs to verify such claims and build consumer confidence in environmentally responsible purchasing.

*Answers to Questions Most-Asked by:
Consumers*

1. *What products can I buy as certified?*

- Furniture
- Flooring
- Doors
- Picture frames
- Lumber
- Plywood
- Veneer
- Musical Instruments
- Decking
- Garden accessories
- Paper products
- Charcoal
- Window frames
- Decorative molding and trim
- Paneling
- Cabinets, casegoods, and shelving

Consumers can now purchase Gibson Guitars made from FSC-certified wood. Many catalogues also now carry FSC-certified products and indicate this in their advertising.

2. *What can I do if there are no retailers in my area that offer FSC-certified wood products?*

Just ask: A retailer may be able to order certified wood for your project or product purchase. Your request may even motivate them to supply it on a regular basis.

Call for information: Contact the nation's largest buyer's group for certified wood products:

Certified Forest Products Council
14780 SW Osprey Drive, Suite 285
Beaverton, OR 97009-8424
503/590-6600
503/590-6655 (FAX)
cfpc@ix.netcom.com (email)

- * *You can request information on companies in your area that carry products made from certified wood*
- * *You can request that they contact your favorite retailers to offer them the opportunity to carry certified wood products.*

3. *Are certified wood products lower quality products, like some recycled products?*

Certified wood comes in all species and grades (levels of wood quality). It is not recycled or re-used wood. Since certification often reduces the amount of wood someone can harvest from their land, certified wood producers have sought to find the 'highest and best uses' for their wood in order to recapture lost income. This has often meant that certified wood was actually used in higher quality products.

4. *How will I recognize certified products in stores?*

Certified wood is marked with a special stamp: The FSC logo is stamped on all certified wood products (or on their packaging):



This logo assures the consumer that their purchase supports forestry that meets high standards for environmentally and socially responsible forestry. An FSC certifier logo may also appear on the product alongside the FSC label:

SCS label:



SmartWood label:



5. *Can you cut old growth forests, or clear cut forests, and be certified?*

Old growth:

The cutting of old growth is very limited. It can only happen in very well managed forests where the volume of old growth is increasing. Other kinds of cutting is prohibited in certified forests:

- No cutting of trees and vegetation along streams and rivers because of the need to maintain wildlife habitat, prevent erosion, and maintain water quality.
- No cutting in special and unique areas with rare plants and animals.

Clear-cutting:

Some clear-cutting is allowed under limited circumstances. For example, it may be done to rectify the results of past harmful forest practices (such as past clearing that opened the way for non-native or 'weed' tree and plant species). Depending on the site, the land may be replanted or be allowed to naturally regenerate.

*Answers to Questions Most-Asked by:
Consulting Foresters*

1. *Will FSC certification create more work or regulations?*

Extra work:

Certification may create more work and costs in the start-up phase on a property:

- If a landowner does not have a management plan in place, planning will need to be accomplished before an assessment can occur.
- Foresters and loggers may need additional training, and loggers may need additional equipment to comply with requirements for lower impact logging techniques.
- Certified logs will need to be marked and separated for transportation. Records must be started to track certified logs differently from non-certified logs.
- Extra time may be needed to learn new procedures, but the paperwork and timber separation may be little different from current sorting and tracking procedures used for different tree species and log grades.

Regulations:

Certification is a private service requested and paid for voluntarily by owner/land managers because they consider it a good investment. It is not a regulation.

Politically, certification may avoid the creation of additional regulations, but it will not likely reduce regulation. Many components of certified forest plans are the same as those already required by regulation: stream buffer width, soil and water protection measures, etc.

2. *How does FSC certification affect the forestry profession?*

Many forestry professionals are examining certification to determine its pros and cons. The Society of American Foresters and the Association of Consulting Foresters are studying certification, as are public forestland managers. While many continue to debate the direction of certification, few in the forestry profession disagree that certification is a tool that will be in more widespread use in the future.

It is widely accepted that the forestry profession needs to continue to play a leadership role in helping to shape the future of certification and sustainable forest management practices.

3. *How do foresters and forest owners become FSC certified?*

Foresters: Consulting foresters can become *certified resource managers*, which means that their management practices are assessed for adherence to FSC principles and standards and audited annually. This allows the lands they manage for multiple clients to be deemed as certified.

Forest Owners: Upon request from a forest landowner, a multi-disciplinary team of scientists and forestry professionals provided by the certifier assesses forest management plans and practices. Typical steps to a landowner certification process include:

- **Scoping** - *a preliminary review to determine the readiness of an operation to proceed with full assessment*
- **Documents review** - *A review of landowner management plans.*
- **Field assessment** - *An in-field review of practices on the ground.*
- **Draft report**
- **Applicant comment of Draft report** - *this allows the applicant to correct errors of fact and clarify information to the certifier.*
- **Final report**
- **Peer review** - *the final report by the certifier is peer-reviewed by other forestry professionals prior to the certification decision.*
- **Certification decision**

4. *What are the costs and benefits of FSC certification?*

Costs ...

Typical owner costs: The direct cost of paying for a certification assessment can range from less than 50¢ per acre to several dollars per acre for small and medium-sized landowners, depending on property size, location, etc. Large landowners (over 100,000 acres) pay an average of 15¢ to 17¢ per acre.

Certification contracts last for five years, with annual audits costing typically between less than 1¢/acre to over 20¢/acre, again depending on acreage size.

Landowners can retain foresters who have been certified (known as *certified resource managers*) to manage their forestlands at greatly reduced per-acre costs to the landowner while still allowing the landowner to have *certified* forests recognized in the marketplace.

Other costs: To become and stay certified, foresters may need to create or amend plans to meet certification requirements. Landowners may be required to change harvest practices and volumes

extracted to achieve certification. Modifications in management plans and practices can increase overall costs to the landowner.

Foresters may also require additional training in order to become a *certified resource manager*.

Benefits ...

There is a growing market for certified wood products in the U.S. and internationally.

Forestland owners investing in certification typically *recover their investment* in short periods of time (within 12 to 18 months). Some are receiving *premiums* (sales above cost of product plus profit) on the sales of their certified wood and wood products. More importantly, access to new markets appears to be a consistent benefit of offering certified wood and wood products.

Buyers Groups: Certified wood product buyers groups have been formed throughout the world to foster certified wood product purchasing in worldwide wholesale and retail markets. Buyers groups exist in 12 different countries worldwide, including North America (which currently has over 140 buyer members).

5. Does certification pay for itself?

Certification is still a relatively young program. Cost and benefit information sufficient to indicate statistical trends is not yet available.

On the plus side: Some large corporations are looking at certification as a competitive advantage. These forest products companies are selling to markets for certified wood in the U.S. and Europe. Small woodland owners in Wisconsin and Vermont are using certification to protect family lands. They are making certification work economically through employing certified resource managers, and by evaluating certified landowner co-ops that include milling and distribution operations.

On the minus side: Certification may not be cost effective in some areas, depending on species offered, resource grades, parcel size, and knowledge of accessing markets. Markets for certified wood can be especially strong in traditional species in higher grades. Markets are more difficult to document for products made from lesser-known species and lower grade material.

6. How does certification address the larger issues of forestry?

It remains to be seen whether certification will resolve key issues facing forestry, but the following explains how certification aims to address some of these concerns:

Increasing regulation and costs: Certification does not avoid existing regulation, but it does have the potential to help reduce the need for additional regulation by rewarding good forestry practices through market-driven incentives. Certification can increase forest management costs, but it can also increase market access and market share, and may even provide premium payments for some products.

Environmental concerns: Certified forestry is environmentally-sensitive forestry regarding impacts on soil, water, wildlife, and habitat. Leading national and international environmental groups such as the World Wildlife Fund, The Audubon Society, and The National Wildlife Federation actively support FSC certification and those who invest in FSC certification.

Foreign competition: Markets for certified wood are substantial in Europe, and certified hardwood and softwood exports from the U.S. compete very well there. Certification may not be able to compete, however, with cheaper foreign timber and lumber products.

Negative public opinion: FSC-certification is one of many new campaigns that has been initiated to address negative public opinion about forest practices. The forest industry also offers other programs that target sustainable forest management practices, such as SFI, ATF, and Green Tag.

Forest conversion and fragmentation: Certification is being viewed as an acceptable tool to promote experimental pilot projects and collaborative efforts to protect the tenure of forest lands, keep land in families, and reduce the rate of conversion of forests to urban development.

7. Questions to Ask:

Some important questions to ask when determining whether to pursue certification:

- *Is your timber suitable for product types that are currently sold in FSC-certified wood product markets (flooring, furniture, millwork)?*
- *Are there manufacturers in your region who are working with FSC-certified wood in product development?*
- *Where can I get information on certification?*
 - * technical and marketing assistance
 - * advice, references, and testimonials
 - * an application
 - * a copy of the rules and standards
 - * contact with my regional standards group
 - * a sample forest plan for my area
 - * classes and seminars
 - * a website address
- *How do I find certified mills and manufacturers?*
 - * How do I track certified and non-certified wood?
 - * How do I deal with people's fears and concerns about certification?
- *How do I market and sell my client's timber?*
- *What is the life span of certification?*

Answers to Questions Most-Asked by: Loggers

1. How does certification affect landowners?

Landowner's goals: The FSC certification program may fit with a landowner's goals, whether the owner has a small woodland or a large industrial forest. This depends on whether certification can lead to a return on investment. Most owners want income, but most also want to keep their forest healthy, attractive, available for hunting or recreation, and *valuable*.

Landowner's rights: The landowner chooses and pays for certification at his or her own expense, a strictly private choice. The owner is then expected to follow the management plan that spells out annual production levels and volume, as well as forest improvement practices.

Landowner protections: The requirements of a certified management plan limits unsustainable types of harvest (such as liquidation) should the owner become financially pressured by taxes or other unforeseen expenses, but it cannot prevent an owner from '*cashing in*' on their trees. The management plan (and the annual audit process) will tend to reinforce an owner's commitment to long-term sustainable management.

On the plus side:

Landowners can find new markets for their wood. Today, U.S. and European consumers are buying a wide variety of FSC-certified hardwood and softwood products, from commodity lumber to furniture to paper products.

On the minus side:

Certification may be too new of a program for some landowners to invest in. One logger commented that among his clients, "*95% are interested in long-term management and 'light touch' logging methods*" (which are encouraged by certification) but "*few want certification because they know nothing about it. Owners must be educated on the long term benefits and economics of certification.*"

2. How does certification affect what happens in the forest?

Forest management benefits: The management plan aims at improvements that lead to better quality timber as well as healthier forests. Certification ensures better forest management in two ways:

1. By requiring landowners to have a management plan for their forest;
2. By checking on-the-ground performance each year to verify compliance with the plan; and by reviewing the plan every 5 years for changes or improvements which may be needed.

Environmental practices: Certification also encourages additional practices like retaining down woody debris, setting-aside of areas for wildlife habitat, and protecting against soil erosion.

3. *How does certification affect logging contractors?*

Other loggers' experiences with certification are mixed:

Pro: Depending on the forest type and the local/regional interest in environmental issues, certification may demonstrate that the logging contractor is a professional firm. A logger from Oregon commented, *"I want to prove to my clients that I am serious about sustainable forestry. We like to do high quality logging work, and I think certification tells them this."*

Con: A logger in Florida explained *"We are known for our outstanding work in environmentally-sensitive areas (boggy ground and swamps) and we already do a good job for the land and the landowner. It is not necessary for a third party to tell us what to do."*

What to watch for:

Increased landowner awareness of certification. The topic of certification has become a *front-and-center* issue for those in forestry and wood products manufacturing. Loggers can expect many more forestland owners to receive information on certification issues, and to respond by asking the logging operations they employ questions on certified harvesting practices.

Increased sawmill demand for certified wood: This demand may come from two different avenues. First, in some regions in the U.S., there is a **lack of supply of certified wood resources:**

- Hardwood producers in the Lake States region of the U.S. cannot produce enough certified maple for flooring markets;
- Softwood producers in the West cannot produce enough certified wood scrap material (to be chipped) to meet a growing demand for certified OSB.

This condition does pose difficulties for producers and may place added pressures on loggers to locate targeted certified timber resources.

The increase in public (municipal, state and county) forestland certifications may also add pressures on processing operations to produce certified wood products. When public forestlands in Pennsylvania and Minnesota were certified, wood product manufacturers in both states were contacted by domestic and international wood product buyers looking to purchase FSC-certified wood products.

Requirements for loggers to be more aware of where the markets are for certified wood. Not a simple task - as markets for certified wood products are not mainstream yet. Certification may not be cost effective in some areas, depending on species offered, resource grades, parcel size, and knowledge of accessing markets. Markets for certified wood can be especially strong in traditional species in higher grades. Markets are more difficult to document for lesser-known

species and lower grade material. Similarly, while overall markets for certified wood are substantial in Europe, and certified hardwood and softwood exports from the U.S. compete very well there, certified wood may not be able to compete with cheaper foreign timber and lumber products.

4. Questions to ask:

Certifiers:

1. *Where can I get information?*
 - technical and marketing assistance
 - advice, references, and testimonials
 - an application
 - a copy of regional rules and standards
 - contact with my regional standards group
 - a sample forest plan for my area
 - classes and seminars
 - a website address
2. *How do I find certified mills and manufacturers for my clients?*
3. *How do I track certified and non-certified logs?*
4. *How do I deal with people's fears and concerns about certification?*
5. *How do I market and sell my client's certified timber?*

Landowners:

1. *Are you interested in risking extra investment in certification to find new markets?*
2. *Are you interested in furthering the values represented by certification?*
3. *What return on investment would you need to realize in order to consider investing in certification?*

Mills:

1. *Are you certified or interested in becoming certified?*
2. *Are you able to separate certified from non-certified logs and lumber in your manufacturing and inventory?*

*Answers to Questions Most-Asked by:
Public Land Managers*

1. Is certification acceptable to the public?

Certification was designed to combine economic goals with environmental and social values. This approach may or may not be acceptable in each region, but it is important to be clear about the extent that certification is able to affect people's values and goals.

Property rights: Certification is a voluntary, market-driven tool for landowners or public land managers to improve forest management and to open markets for timber. Its application to any landscape or parcel is *strictly optional*.

Regulations: Certification does not increase regulations or interfere with existing regulations. In fact, many components of a certified forest plan are the same as those already required by regulation or practice: stream buffer width, soil and water protection, etc. All certified forests must still follow existing regulations or Best Management Practices in their jurisdiction.

Credibility: Landowners or land managers have selected certification to obtain increased public visibility and credibility, and gain financial and marketplace reward for good practices. An independent, third-party audit of public management has been accepted by many different interest groups as a good check on public managers because it establishes baseline information, which is monitored on an annual basis.

Certification lacks credibility in some areas:

- Some environmental groups believe certification is a way to increase harvests on public lands;
- Some forest industry businesses fear certification has an environmental 'agenda' to stop logging and clear-cutting, and increase producer costs;
- Some public land managers feel the certification program is too new and economically unproven for them to consider at this time.

2. Is certification compatible with local goals and laws?

Certification can fit with common goals and laws of public land managers. The following examples are drawn from existing public land certification programs:

Enforcement of regulation and BMPs through annual audit procedures

Stewardship via increased non-industrial private forestlands (NIPFs) use of management plans

Outreach to non-industrial private forests, industrial forests, tribes, and county, state, and federal land managers

Reforestation of crop and pasture lands

Preserving forest cover by preventing liquidation and encouraging reforestation and profitable economic uses of forests

Data collection and monitoring on an annual basis, to track baseline information obtained from an in-depth forest assessment

Rural economic development through the encouragement of diverse, small scale, value-added wood processing businesses

Funding from private investment, industry support, and partnerships

Maintenance of water quality through harvest and road practices that prevent soil erosion, protect streams and riparian zones, and through planting and retaining streamside vegetation

3. *Will certification improve data collection and monitoring?*

Yes, certification assessments are currently used to establish adequate baseline information and monitoring that is recognized by forest scientists.

4. *Is assessment and inventory data shared with government agencies (for statistical analysis and planning)?*

The data belongs to the party who purchased the certification service, private or public.

5. *How is multi-party management addressed by certification?*

Multiple small ownerships: Certification can promote long-term sustainable forest management over multiple small ownerships under the following circumstances:

- overall land area is sufficient in size to produce an economically significant annual wood volume;
- the timber species produced have existing markets;
- landowners are willing to form **woodland cooperatives**, managing their parcels under a single forest plan using a *certified resource manager* (a forester trained in forest certification practices).

Landscape-scale management: Certification can also address landscape-scale forest management and watershed protection, such as insect and disease problems or wildlife corridors, under certain circumstances:

- **In large private holdings**, typically corporate lands, such as those owned by Collins Pine in Oregon and California or Seven Islands in Maine;
- **In woodland cooperatives**, as described above;
- **In public/private collaborations**, when state or county lands are combined with multiple adjacent private woodlands under a single certified management plan.

Challenges: cost, complexity, controversy:

Through the certification program has demonstrated flexibility with a variety of arrangements, the certification of large landscape-scale forests has been slow due to increased cost and complexity (on private lands), or because of the potential for political controversy (on public lands).

6. *Do certifiers work with government agencies in partnership on larger issues?*

Yes: Certifiers provide a negotiable contractual service to government agencies, and the 'larger issues' of reforestation or forest fragmentation can be contractually arranged.

& No: Certifiers follow standards and practices established through a different non-governmental process, which may or may not reflect important issues in your region or agency.

7. *Can certification transfer to a new owner? Can it be maintained through numerous ownership changes?*

Yes, new owners can maintain certification by taking over the annual expenses (if the transfer has occurred within the five-year contract).

8. *Can certification apply to federal, tribal, industrial, and NIPF lands all at once?*

Yes, when all parcels are co-managed under a single management plan and follow consistent management practices. This has several benefits:

- Independent third-party audits are more acceptable for all ownership types
- This opens the possibility of addressing landscape-scale issues such as watershed restoration and wildlife corridors
- The certification contract can be negotiated to accommodate unique or special situations

Applicability to public lands: Certification has already been successfully implemented on almost 3 million acres of public forestlands in the U.S. It has direct application to:

- **State trust lands** - certification can independently verify the quality of a state's forest management while still allowing the state to fulfill a statutory obligation to produce income for trustees
- **State or county forest lands** - a certification program can address publicly-determined goals of forest sustainability and income for rural communities
- **Municipal watersheds** - certification programs can protect watersheds while defraying the costs of management
- **Federal lands** managed for non-forest agencies or objectives such as:
 - 1) demonstration sites for research
 - 2) military sites for the purpose of defraying the costs of sustainable forest management

*Answers to Questions Most-Asked by:
Conservation Organizations*

1. *Are FSC certification standards specific enough to protect forest ecosystems?*

The standards start with 10 internationally recognized principles that are focused on economic, environmental, and social issues:

1. *Compliance with laws*
2. *Tenure and use rights & responsibilities*
3. *Indigenous peoples' rights*
4. *Community relations and workers' rights*
5. *Optimizing forest benefits*
6. *Minimizing environmental impact*
7. *Management plan*
8. *Monitoring and assessment*
9. *Maintenance of natural forests*
10. *Plantations*

Ecological, economic, and social indicators are measured: The following are typical examples of indicators examined and measured by certifiers in the forest plan assessment phase:

- **Ecological indicators:** percentage basal area harvested/retained, regeneration, mix of native species, soil chemistry, wildlife and fish habitat, snag retention, down woody debris, water quality
- **Social indicators:** labor practices and history, aboriginal rights, economy of nearby forest-dependent communities
- **Economic indicators:** local value-added processing, waste reduction, diversified local economy.

Standards are defined regionally: FSC's agencies organize local stakeholder working groups to write regional standards that follow the 10 principles, and environmental organizations are part of these working groups. The regional standards working groups are currently operating in the following regions in the United States:

*Northeast
Appalachia
Southeast
Mississippi Valley & Ozarks
Great Lakes
Southwest
Northern Rockies
Pacific Coast*

To become certified, a landowner must write a detailed management plan that specifies acceptable practices and harvest levels, which often *reduces* harvests below production levels considered maximally possible.

2. *Is FSC certification flexible enough to address public vs. private land, large landscape-scale issues, multiple ownerships, etc.?*

Certification can address landscape-scale forest management and watershed protection, such as wildlife corridors, under many different types of land ownerships:

- **In large private holdings**, typically corporate lands, such as those owned by Collins Pine in Oregon and California or Seven Islands in Maine;
- **In woodland cooperatives**, where multiple woodland owners share the expenses of a single certified plan (or employ a certified forest manager to coordinate management across boundaries);
- **In public/private collaborations**, where state or county lands are combined with multiple adjacent private woodlands under a certified forest landscape management plan.

Slow progress: Although FSC has demonstrated flexibility with a variety of arrangements, certification of large landscape-scale forests has been slow because of its cost and complexity (on private lands) and its potential for political controversy (on public lands).

3. *What is the follow up and enforcement on certified practices?*

Certification is based on what actually happens in the forest (*performance-based*) and is measured by scientifically-defined indicators. This process is similar to the annual financial audit of corporations, paid for by shareholders and performed by an outside (*third-party*) accounting firm.

Public input and access: Public input occurs in the standards working groups which are required to include multiple interests and have "*fair and democratic decision-making procedures, adequate public participation and representation by diverse stakeholders, and a clear and transparent grievance procedure.*" Additionally, the certifiers obtain local and regional stakeholder input for each specific forest assessment conducted.

Checks and balances: The certifiers conduct annual audits of those forestlands and manufacturing operations they certify. In addition, FSC conducts annual audits of its certifiers, Smartwood and Scientific Certification Systems. FSC will randomly select cases from a certifier's records to conduct its own in-field assessment and review as a check on the quality, professionalism, and comprehensiveness of the certifier's work.

Enforcement: If certifiers find inconsistencies or irregularities, it is documented in the annual audit process. The certified owner or manager must correct the problem in a stipulated period of time. If this is not accomplished, the operation can be de-certified.

Tracking the chain-of-custody: Once logs are removed from the forest, every processing step from sawmill to dry kiln to furniture manufacturer must be "chain-of-custody" certified. Each business seeking certification must demonstrate that they have tracking procedures that distinguish between certified and non-certified wood they may be processing. They must also demonstrate capability to store certified wood separately from non-certified wood.

4. *Should federal lands become certified?*

Even though certification was initiated by the conservation community, many environmental advocates have expressed concerns that certification will undermine their watchdog role on public lands. This sentiment is particularly true when applied to U.S. national forests. Overall environmental response to certification of public forest lands remains to be seen.

Test cases: During 1997-1998, two states led the nation in offering public forests for FSC certification assessment. Minnesota and Pennsylvania both engaged in FSC assessments on their public forests, collectively totaling almost 3 million acres. Both states were awarded certification, but with different responses from local environmental groups. Environmental groups in Pennsylvania generally supported the state's certification efforts. However, one environmental group in Minnesota criticized their state's certification project, claiming that no public lands should be certified.

What to watch for:

Public lands certification programs that environmentalists widely perceive as positive have the following attributes:

- Local involvement
- Early outreach to environmental groups
- Collaborative arrangements between public and private entities
- Public and private investment and funding
- The existence of local processing infrastructure with the potential for economic diversification
- A high quality forest resource

5. *Questions to ask:*

- *How might the certification program be used to improve current forest management in my region, including the establishment of baseline information and monitoring?*
- *What can the certification steps of assessment and auditing provide in terms of improving current forest management practices?*
- *How can my organization become involved in the regional standards setting process?*
- *What other environmental organizations in my region are involved in monitoring certification efforts?*

Answers to Questions Most-Asked by: Wood Products Manufacturers

1. *How much does a chain-of-custody assessment cost?*

Depending on the size of the operation, chain-of-custody certification costs (for a five year contract) have typically ranged from \$2,000 to \$5,000 and usually only require one to two days time in the field with the certifier.

2. *What are the market trends for certified wood products?*

Positive market trends:

- Evidence does exist that documents growth in national and international markets for certified wood for timber producers. Manufacturers investing in certification have made a *return on their investment* in short periods of time (within 12 to 18 months). Some are even receiving *premiums* (sales above costs of product plus profit) on the sales of their certified wood and wood products.
- More important than premiums, producers are obtaining access to new markets-- "*it used to be we'd have to find buyers, now they are coming to us...*"
- Some manufacturers claim they have found substantial new markets, regularly selling large orders to customers that they never had before.
- Certified wood product buyers groups have been formed throughout the world to foster certified wood product purchasing in worldwide wholesale and retail markets. Buyers groups exist in many continents throughout the world including North America (which currently has over 140 buyer members).

Negative market trends:

- Some manufacturers have received sizeable orders for certified wood for special projects once in a while, but little ongoing or sustained orders for products made from certified wood.
- Certified wood product demand cannot yet be considered 'mainstream'. Markets tend to be focused on certain products—such as furniture and flooring.
- Geographically, market demand for certified wood can vary significantly.
- Demand is often matched to desirable traditional species in higher grades (although demand for certified "characterwood" is becoming more evident).

3. *How does chain-of-custody work?*

For logs:

Certified logs are marked and separated for transportation, and records are established to track the certified logs differently from non-certified logs. Often, certified logs are stamped or bar-coded for transport to a certified wood product manufacturer.

For lumber and other solid wood:

Commodity and value-added solid wood product manufacturers often have "certified resource" facility space in their operations to handle incoming certified logs/lumber. For bar-coded material, processing certified with non-certified resources is possible. This, however, becomes more complicated in the production of value-added product where a bar-coded piece of lumber goes in the process line, but multiple non-coded component pieces come out. As a result, manufacturers typically select to operate separate "menu" runs: one production run with certified material; another production run with non-certified material.

4. *Questions to ask:*

- *Are your product lines in demand by retailers, buyers, and consumers in certified markets?*
- *Are there buyers and retailers in your business region who are selling certified wood products or exporting to markets in Europe?*
- *Do the buyers and retailers in your region use enough volume per year to give certification a competitive advantage over non-certified product buyers?*
- *Can the certifier provide:*
 - marketing assistance?
 - technical assistance?
 - price and cost information?
 - advice, references and testimonials?
 - an application?
 - a copy of the rules and standards?
 - contact with my regional standards group?
 - classes and seminars?
 - a website address?
- *Can the certifier supply information on:*
 - how to find other certified producers and mills in your region?
 - how to track certified and non-certified wood?
 - how to deal with people's fears and concerns about certification?
 - how to market and sell certified products?
 - about the company's track record?

*Answers to Questions Most-Asked by:
Brokers and Wholesalers*

1. *How does FSC certification affect brokers and wholesalers?*

Certification is likely to have an increasing impact on wood products wholesalers and brokers.

On the plus side:

Today, consumers in the U.S. and Europe are buying a wide variety of FSC-certified hardwood and softwood products, including:

- Commodity lumber and plywood
- Furniture
- Flooring
- Paneling
- Doors and windows
- Casegoods and shelving
- Toys
- Guitars
- Paper products
- Charcoal

Certification has increased access to new markets and increased market share for wholesalers and brokers who are FSC-certified, providing them increased visibility to wood product manufacturers who need the distribution services of certified wholesalers.

On the minus side:

Certification may not be cost-effective in some areas depending on the species offered, the grade, the available volume, and knowledge of existing markets for certified wood. Markets for certified wood can be strong in traditional species in higher grades. Markets are more difficult to document for lesser-known species and lower grade material.

2. *Will certification help the wood products industry?*

It remains to be seen whether certification will resolve key issues facing forestry, but the following explains how certification aims to address some of these concerns.

Credibility, and the negative image of the wood products industry:

More and more, a wide variety of catalogues and retailers are advertising how their products are:

- *"from sustainably-grown plantations"*
- *"harvested with sensitivity to the environment"*
- *"made from recycled materials"*

This suggests retailer desire for a stamp of approval, which FSC-certification offers because it requires third-party performance-based verification of forest management practices. **Those who invest in certification enjoy renewed environmental and consumer credibility.**

Foreign competition:

Markets for certified wood are substantial in Europe, and certified hardwood and softwood exports from the U.S. compete very well there. Certification may not be able to compete, however, with cheaper foreign timber and lumber products.

Stability in the wood products industry:

The wood products industry is undergoing immense change. Certification, like several other new efforts, is a response to that change. It is too soon to tell if this will bring stability to the wood products industry.

Resources to Contact

Certified Forest Products Council

14780 SW Osprey Dr., Suite 285
Beaverton, OR 97009-8424
503/590-6600
503/590-6655 (FAX)
cfpc@ix.netcom.com (email)

Scientific Certification Systems (SCS)

1939 Harrison Street, Suite 400
Oakland, CA 94612
510/832-1415
510/832-0359 (FAX)
www.scs1.com (website)

Forest Stewardship Council - U.S.

RD 1 Box 182
Waterbury, VT 05676
802/244-6257
802/244-6258 (FAX)
www.fscus.org (website)

Sustainable Forestry Initiative

American Forest & Paper Association
1111 19th Street NW, Suite 800
Washington, DC 20036
202/463-2432
www.afandpa.org (website)

Smartwood

#1 Millet Street
Goodwin-Balcer Building
Richmond, VT 05477
802/434-5491
802/434-3116 (FAX)
smartwood@ra.org (email)
www.rainforest-alliance.org (website)

The Green Tag Program

National Woodland Owners Association
374 Maple Avenue East, Suite 210
Vienna, VA 22180
703/255-2700
703/281-9200 (FAX)

The American Tree Farm Program

American Forest Foundation
1111 19th Street, NW
Washington, DC 20036
202/463-2458

Contact your state forestry agency or forestry association for names of your state's Tree Farm Committee members, or check the Tree Farm System website: www.treefarmssystem.org.

APPENDIX A: The Sustainable Forestry Initiative (American Forest and Paper Association)¹

The SFI Program: A Bold Approach to Sustainable Forest Management

MEMBERS OF THE AMERICAN FOREST & PAPER ASSOCIATION (AF&PA) Ushered in a new era of forest management with the adoption of the Sustainable Forestry Initiative (SFI) program. While this action was revolutionary in scope, it was built on the individual practices of many in the US forest and paper industry who have long recognized the critical need to promote sustainable forestry on all forestlands. The SFI program was adopted by AF&PA in 1994 and, as a testament to the association's strong commitment to the principles of sustainable forestry, participation in the SFI program is a condition of membership for AP&PA. Since the program's inception, 15 companies have been expelled from AF&PA membership for failure to comply.

SUSTAINABLE FORESTRY INITIATIVE PROGRAM

The Sustainable Forestry Initiative Standard

The SFI Standard (SFIS) spells out the requirements of compliance with the program. SFI program participants support sustainable forestry practices on the lands they manage and actively promote such practices on other forestlands. This commitment to sustainable forestry stems from the participants' convictions that forest landowners have a critical stewardship responsibility to current and future generations of Americans.

The SFI Program: Doing Well By Doing Good

The Sustainable Forestry Initiative program provides a means for foresters, landowners, loggers and wood and paper producers to operate an economically viable industry while satisfying the growing demand of the American people for environmental responsibility. The SFI program reflects the market and social realities of the 21st century. In short, the SFI program means using smart science to achieve smart business results. In today's competitive market, demonstrating that you are part of an environmentally responsible organization can be a decisive advantage.

What Is the SFI Program?

The Sustainable Forestry Initiative program is a comprehensive system of principles, objectives and performance measures that integrates the perpetual growing and harvesting of trees with the protection of wildlife, plants, soil and water quality. Simply stated, it's working with nature to ensure the future of the nation's forests for our children and grandchildren. And it's based on the premise that responsible environmental practices and sound business practices can be integrated to the benefit of landowners, shareholders, customers and the people they serve.

¹ Information supplied by the American Forest and Paper Association (AF&PA). For further information, please contact AF&PA directly at 202/463-2700.

Developed by Foresters, Conservationists, Scientists

Professional foresters, conservationists, and scientists developed the SFI program. These men and women were inspired by the concept of sustainability that evolved from the 1987 report of the World Commission on Environment and Development, and was subsequently adopted by the 1992 Earth Summit in Rio de Janeiro.

SUSTAINABLE FORESTRY INITIATIVE STANDARD

Principles

At the heart of the SFI Standard are the SFIS Principles. These Principles call upon SFI participants to meet market demands while using environmentally responsible practices that promote the protection of wildlife plants, soil, air and water quality to ensure the future of our nation's forests.

Objectives

The SFI Standard Objectives translate these Principles into action by providing forest managers with a specific roadmap to expand the practice of sustainable forestry and to visibly improve performance. The Objectives form the substance of the program and promote:

- Broadening the practice of sustainable forestry
- Ensuring prompt reforestation
- Protecting water quality
- Enhancing wildlife habitat
- Minimizing the visual impact of harvesting
- Protecting special sites
- Contributing to biodiversity
- Continuing the prudent use of forest chemicals to help ensure forest health

Independent Expert Review Panel

A distinguished group of 18 independent experts representing conservation, environmental, professional, academic, and public organizations comprise the Independent Expert Review Panel. The mission of the Expert Review Panel is to provide a framework to conduct an independent review of the SFI program and to ensure that the Annual report fairly states the status of SFI program implementation. The volunteer Panel provides external oversight with their independent review of the current SFI 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 Voluntary Verification Process

Market and public expectations regarding environmental stewardship continue to evolve. In response to these evolving expectations, the American Forest & Paper Association added a Voluntary Verification Process to its SFI program. Through SFI Voluntary Verification, member companies and licensees may choose to apply a rigorous and internationally consistent verification approach to document and communicate their conformance to the SFI Standard.

SFI Benefits

Participation in the SFI program means affiliation with an internationally recognized environmental program. Organizations whose customers are attentive to environmental issues can reap the benefits of participation through:

- Use of the SFI program logo on organization's materials
- Greater access to professional foresters throughout the US
- Increased involvement in community forestry activities including outreach and training
- Opportunity to participate in the SFI Voluntary Verification Process

Additionally:

- Those involved in the program demonstrate leadership by working to broaden the practice of sustainable forestry
- Those that participate demonstrate they are part of the solution to the conservation of America's forestlands and the wildlife and biological diversity dependent on these lands.
- The praise, awards and recognition earned by the program have benefits that accrue to those who participate in the program

Companies have the flexibility to conduct a self-verification; have the customer or another company verify conformance; or contract with an independent third-party to conduct the verification. Regardless of which verification approach is used, the process for conducting the audit must be uniform, and all auditors must meet rigorous educational and professional criteria.

SFI Licensing

In 1998, the SFI program was opened to companies, landowners, and organizations outside of AF&PA membership. AF&PA leadership initiated this move, recognizing that a partnership with diverse stakeholders will foster new and innovative means of accomplishing continuous improvement of forestry practices. The Conservation Fund, a nationally respected conservation organization, became the first non-profit organization in the US to become an SFI licensee. The Conservation Fund enrolled three demonstration forests comprising 20,000 acres of working woodlands. St. Louis County, with 900,000 acres in Northern Minnesota, was the first public land agency to enroll in this award-winning program.

Awards and Recognition

The SFI program has received high praise from a variety of sources:

- 1998 *Summit Award*, from the American Society of Association Executives (ASAE), the highest award in the ASAE's Advance America Awards Program
- 1997 *Business Conservation Leadership* award from the National Association of Conservation Districts
- Recognized as *a significant development* in private sector efforts to improve the environment by President Clinton's Council on Sustainable Development in 1996
- AF&PA was awarded a Certificate of Appreciation in 1996 at the 50th anniversary ceremonies of the US Bureau of Land Management. The SFI program was specifically cited as a major reason for AF&PA receiving this award.

State Legislatures Offering Support for the Goals of the SFI Program -- Resolutions Passed

- Indiana
- Michigan
- Maine
- Missouri (Executive Order)
- New Jersey
- New York
- Texas
- Pennsylvania

Appendix B: The American Tree Farm System (American Forest Foundation)²

The American Tree Farm System: Voluntary Certification of Sustainable Forestry

Voluntary verification/certification programs are not new to forestry in the United States. Today, nearly 70,000 non-industrial, private landowners have 25 million acres of forests enrolled in the American Tree Farm System, a voluntary certification program. Approximately 8,000 professional foresters volunteer expertise in forest management to Tree Farm members.

A Tree Farm is a privately owned forest dedicated to producing renewable and sustainable crops of forest products while protecting the soil, water, range, aesthetic, recreation, wood, fish and wildlife resources. A Certified Tree Farm must maintain standards set by the American Forest Foundation and is decertified if it fails to continue to meet the standards.

American Tree Farm System is sponsored nationally by the American Forest Foundation (AFF), a nonprofit, educational 501 (c) (3) foundation. The AFF operates the program and controls its standards and operations through state and national committees and co-sponsors. It is a privately funded, national effort to encourage and recognize excellent forestry on private lands that are committed to sustained production of timber under a multiple use management approach. The System operates as an informal partnership encouraging resource management professionals from all disciplines and sectors (industry, public agencies, private consulting, and associations) to collaboratively provide expertise to private forest landowners.

Background

The Tree Farm System was begun in 1941 by wood using industries in the US that committed themselves to growing repeated crops of trees on that land. Forest industries continue as major sponsors to the present. Tree Farming has grown into America's largest volunteer forest conservation effort involving foresters from all branches of the profession, landowners of many backgrounds, and all segments of the industry, grants, member contributions, and publication sales.

Evolving from an initial public concern that private forests in the United States were being cut at unsustainable rates without reforestation, the Tree Farm program has evolved through the years to address a steadily widening array of public concerns about privately owned forests. In the 1960's, the definition of a Tree Farm was expanded to include all facets of multiple use forestry, in which production of tree crops was only one facet. In the 1990's, the definition of a Tree Farm is further expanding to include an even broader array of emerging sustainable forestry concepts that are of public interest.

The System operates through state Tree Farm committees that have co-sponsorship arrangements with state forestry associations or other local organizations with forestry interests. State committees provide Tree Farmers with opportunities to participate in forestry-related conferences, field days, study tours and seminars. Some of the larger committees provide local newsletters and other services.

² Information supplied by the American Forest Foundation. For further information, please contact the American Forest Foundation directly at 202/463-2458.

Members of state Tree Farm committees and inspecting foresters include diverse representation from forest industry, consulting forestry firms, state and federal forestry agencies and university forestry extension programs. Certification and re-certification inspections are third party inspections conducted on the property with the forest owner present.

To be qualified as an inspecting forester for the American Tree Farm System, inspectors must meet the following minimum education and/or experience requirements.

- A Bachelor of Science, Forestry degree, or higher from a Society of American Foresters (SAF) recognized college/university.
- Two year forestry technician degree from a SAF recognized college and working under the supervision of a qualified forester.
- Anyone professionally practicing forestry and meeting the following minimum educational requirements set by SAF to achieve the SAF Certified Forester title.

Upon meeting these conditions, inspectors must attend an ATFS Inspector Training Workshop. At these workshops, inspectors become certified to inspect properties. Inspectors must attend training workshops every five years in order to maintain their certification.

State committees arrange for foresters to inspect and certify Tree Farms. To become a Certified Tree Farmer, a landowner must have a written forest management plan jointly approved by a qualified forester, technician or other natural resource professions with training and experience as determined by the American Tree Farm System.. Specific requirements for certification are summarized in the following section.

Tree Farm Standards and Levels of Achievement

Standards for Tree Farm certification are developed and housed under the auspices of the American Forest Foundation. Standards and performance measures are crafted through participation of multi-stakeholder groups in a series of national meetings. They are reviewed periodically by a third party independent committee that reports its findings and recommendations to both AFF officers and the Tree Farm national Operating Committee.

Tree Farming currently has two levels of achievement: Pioneer and Certified. Pioneer standards and procedures reflect the beginning level of Tree Farming. Certified is the highest level of achievement and has more stringent standards. A series of general standards apply to both Pioneer and Certified levels. Specific standards and procedures for each level are summarized below and general standards are presented in a subsequent section.

Pioneer Tree Farm Standards and Procedures

The program goal of Pioneer Tree Farm status is to establish communications with non-managing forest landowners to motivate them to work toward Tree farm certification by implementing excellent forestry on their woodlands. To obtain Pioneer status, the landowner must have written forest management recommendations developed by a qualified forester and jointly signed by the

forester and landowner. These recommendations are not as comprehensive as the management plan required at the Certified level. Each Pioneer Tree Farm must meet Certified standards within 1-5 years or lose its Pioneer status.

Certified Tree Farm Standards and Procedures

Certified Tree Farm status is the highest level of Tree Farming. To obtain Certified status, the landowner must have a written Tree Farm plan that documents the landowners goals, production of renewable crops of forest products, and protection of soil, water, range, aesthetic, recreation, wood, fish and wildlife resources. The plan must be crafted to meet the landowner's specific forest management objectives, be developed by a qualified forester, and jointly signed by the forester and landowner. While the plan must address the above listed areas, it does not have to be a long, complicated document.

The landowner must follow through on the plan elements by on-the-ground implementation of the forest management practices on a significant portion of the certified land in order to maintain Certified status. Accomplishment of 30% or more of the recommended practices within the first three years is considered significant. Accomplishments are documented through inspections by the forester and reports to the State Tree Farm committee. A formal re-inspection must occur within 5 years of the certification to verify plan implementation in order to maintain Certified status. Failure to demonstrate continued compliance with the standards results in de-certification by the State Committee.

National General Standards for Tree Farms

Generally, only privately owned and managed forestlands are eligible for Tree Farm certification. However, some categories of private lands may qualify if they are owned as school forests, municipal or town forests or municipal and town watersheds. All ownership types must include production of renewable crops of forest products in order to be eligible. Areas devoted to growing Christmas trees can be certified if they are well managed, as well as forests being well managed for maple syrup production.

The minimum size considered for Tree Farm status is 10 acres and the area must predominately support a medium or better stocking of commercial forest trees. Sites of smaller size can be considered by State Committees if the areas have special merit. Fields, treeless bogs, lakes, brush land, home sites or other non-forested areas of 5 acres or more must be addressed in the Tree Farm plan but are not actually counted in the Tree Farm acreage. The goal is to have all forestland owned by a single owner managed according to the Tree Farm acreage. The goal is to have all forest land owned by a single owner managed according to the Tree Farm plan; however, owners may certify their main ownership first and then add additional tracts later as they are placed under management.

Forest management practices implemented by the landowner must enhance the health and productivity of the forest while protecting soil, water range, aesthetics, recreation, wood, fish and wildlife resources (see attached standards and performance measures). The specific suite of management practices implemented will vary by landowner based on the Tree Farm size, forest characteristics, and management objectives. Three generally applicable categories of practices are protection, regeneration, and harvesting.

Protection. Forest practices must protect the woodland from damaging effects of fires, Diseases, insects and destructive grazing, and ameliorate the effects of damaging weather. Specific practices might include: construction fire lines and fire control ponds; disposal of high fire hazard logging slash; fencing to prevent overgrazing; removing over-aged, diseased, insect-infested or weather damaged trees; establishing stands of mixed species and ages; establishing water bars and other erosion control measures; special management of stream side zones; and implementation of Best Management Practices in all activities.

Regeneration. Landowners must provide for prompt restocking of desired tree species on harvested areas and afforest idle areas where tree growing is the land use objective. Regeneration can be accomplished by natural seeding, sprouting, direct seeding, tree planting, or any combination of these practices. Site preparation should be implemented to assure that regeneration is successful by removing residual or competing vegetation.

Harvesting. Landowners must be willing to harvest trees and other crops in order to participate in the Tree Farm program. Harvest practices must maintain or improve forest productivity, health, and growth while protecting the associated resources. Harvest practices should be prescribed based on tree conditions, tree types and anticipated reforestation method and desired species. Clear cutting, shelterwood cuts, thinnings, improvement cuts, and precommercial thinning are all acceptable harvest practices as long as implemented properly.

State Tree Farm Standards

State Tree Farm committees can develop more specific, written state standards for certification that are tailored to their specific situations. These standards can be more specific than the national standards, but must be fully compatible with national standards. Proposed state standards must be approved by the National Tree Farm Operating Committee. Only those state standards that are clearly written within national parameters will be approved.

*The American Tree Farm System
Standards, Guidelines and Performance Measures
for Member Certification*

<i>American Tree Farm System Standards & Guidelines for Forest Landowner</i>	<i>American Tree Farm System Performance Measure for Certification</i>
Ensuring Sustainable Forests Members of the American Tree Farm System promote the growing of renewable forest resources on their forestland while protecting environmental benefits and are encouraged to strive to increase public understanding of all benefits of productive forestry.	Ensuring Sustainable Forests Performance Measures: To achieve and maintain certification all members must have a written and active forest management plan. This plan must take into consideration maintenance and/or enhancement of wood and fiber production, wildlife habitat, water quality, and recreational opportunities.
Reforestation Members must provide for prompt restocking of desired species of trees on harvested areas and idle areas where tree growing is the land use objective. This may be accomplished by natural seeding, sprouting, direct seeding, or reforestation with tree seedlings.	Reforestation Performance Measures: To achieve and maintain certification, members must achieve satisfactory restocking levels within five years following harvest or less if specified by state or local ordinance. Acreage not reforested because of change of use shall be deducted from overall Tree Farm acreage.
Water Quality Forestry practices must include the application of the state's EPA-approved forestry best management practices (BMPs) or forest practices act as well as any other practices required by local, state or federal regulations.	Water Quality Performance Measures: To achieve and maintain certification, members must be in compliance with state Forestry Best Management Practices (BMPs) or forest practices act to assure water quality standards are met.

<i>American Tree Farm System Standards & Guidelines for Forest Landowner</i>	<i>American Tree Farm System Performance Measure for Certification</i>
Wildlife Habitat Members' forest management plans must address the effects of forest practices on fish and wildlife.	Wildlife Habitat Performance Measures: To achieve and maintain certification, members shall follow forest practices, that to the extent practicable, protect and enhance fish and wildlife habitat, while considering floral and fauna diversity.
Forest Aesthetics Members shall follow forest practices that consider the aesthetic effects of forest activities.	Forest Aesthetics Performance Measures: To achieve and maintain certification, members shall, to the extent practicable, follow forest management practices that demonstrate concern for visual impacts.
Protect Special Sites Implemented forest management practices shall to the extent practicable, recognize and protect recreational, historical, biological, archaeological and geological sites of special interest.	Protect Special Sites Performance Measures: To achieve and maintain certification, forest management practices, to the extent practicable, shall demonstrate concern for special sites.
Biodiversity Acceptable forest management includes the range of even and/or uneven age management practices.	Biodiversity Performance Measures: To achieve and maintain certification, members shall implement forest management practices that enhance the health and productivity of the woodland, while considering biodiversity on a landscape or watershed scale.

<i>American Tree Farm System Standards & Guidelines for Forest Landowner</i>	<i>American Tree Farm System Performance Measure for Certification</i>
Slash Disposal and Utilization Members shall consider harvest contract wording that addresses utilization and slash hazard reduction.	Slash Disposal and Utilization To achieve and maintain certification, members shall make a good faith effort to utilize, in an environmentally and/or economically sound manner, all severed and/or damaged materials on a harvest site.
Prudent Use of Chemicals Forest management practices using herbicides, pesticides and/or fertilizers and implemented by the landowner shall be of the type that maintain or enhance the health and productivity of the woodland while protecting soil, water, fish and wildlife resources.	Prudent Use of Chemicals Performance Measures: To achieve and maintain certification the use of herbicides, pesticides and/or fertilizers must meet or exceed all applicable label requirements as well as all local, state and federal laws.
Forestry Contractor Use The Tree Farm Program provides information, education and assistance to forest landowners regarding forest management practices that will sustain or enhance forest productivity, wildlife habitat, water quality and outdoor recreation.	Forestry Contractor Use Performance Measures: To achieve and maintain certification, members shall make a good faith effort to ensure that loggers and contractors working on their property are make aware of special requirements. In addition, members are encouraged to contract with loggers and other forest management contractors who have completed recommended training and education programs offered for their profession in their respective states and that such contractors are insured and comply with all state and federal regulations.

**Appendix C: Green Tag Forestry
(National Woodland Owners Association)³**

Green Tag Forestry:

Especially for Non-Industrial Private Forest Owners by Professional Foresters

A GREEN TAG FOREST is a woodland whose stewardship has been certified as incorporating good forestry practices that balance natural diversity and sustainable forestry.

It is a "third party" certification--conforming with ISO world standards--that was developed by the National Forestry Association in cooperation with individual members of the Association of Consulting Foresters (ACF) and the National Woodland Owners Association (NWOA).

Green Tag certification provides recognition to private landowners who practice responsible and sustainable woodland stewardship. Designation may bring a market premium as a "green certified forest product." The program complements those sponsored by American Tree Farm and the international Forest Stewardship Council. The forest industry's Sustainable Forestry Initiative as well as the federal/state Forest Stewardship programs may evolve in certification.

GREEN TAG FORESTS are evaluated under the following criteria:

1. **General Management, Forestry Plans, and Stability of Ownership;**
Management plans, including forestry objectives, provide direction for the stewardship of a woodland. Stability of ownership confirms responsibility and ability to implement the natural resource stewardship plans.
2. **Forest Inventory and Natural Diversity;**
A forest inventory establishes a baseline upon which forest management objectives are built. This inventory includes observations of significant flora and fauna that may be present with special emphasis on threatened or endangered species. Considerations for significant findings are included in the management plans.
3. **Logging and Post-Harvest Evaluation;**
Green Tag Forests are under long-term management. Conduct of periodic harvests is very important so as to enhance productivity while protecting--and possibly improving--natural diversity. A post-harvest evaluation to assess achievement of this objective is an important step in timber harvests.
4. **Road construction and Stream Crossings;**
The location and condition of roads and skid trails is very important to the maintenance of healthy watersheds. Stream crossings merit special attention.
5. **Product Utilization;**
Balancing carrying capacity with production goals is an important stewardship responsibility. So, too, is good utilization. Saw logs harvests are complemented with pulpwood removal when appropriate.

³ Information supplied by National Woodland Owners Association (NWOA). For further information, please contact NWOA directly at 703/255-2700.

6. **Chemical Utilization;**
The careful use of herbicides and pesticides can enhance forest productivity and not harm natural diversity. Manufacturer's directions and state regulations for application must be followed.
7. **Community Relations;**
Just as individually owned tracts are part of a larger ecosystem (watershed), so are landowners part of a larger community. Responsible stewardship includes concern for society's interests in clean water, diverse wildlife habitat, clean air, and sustainable forest productivity. Open houses, forest mentoring, and participation in voluntary programs (Tree Farm, Forest Stewards, Green Tag Forests) are examples of community participation.
8. **Economic Viability;**
To assure sustainability, private forestry enterprises must be economically viable. Ideally this viability can be sustained solely by the woodland, but additional financial resources available to the landowner may be included. Long-term profitability can be enhanced by tax incentives, cost sharing, forestry education, private partnerships, and other programs.
9. **Record Keeping and Tracking;**
The maintenance of good records and periodic updating is essential to the successful conduct of a long-term forestry enterprise. Such records are, however, private information. They are shared with the certifier, but would be available for public review only at the discretion of the landowner.
10. **Commitment to Sustainability;**
This can be shown in several ways, including participation in a current use taxation plan, or the sale or donation of a conservation easement.

APPENDIX D: The Forest Stewardship Council (FSC) Certification Program⁴

PRINCIPLES AND CRITERIA FOR FOREST MANAGEMENT

Revised Version: January 1999

INTRODUCTION

It is widely accepted that forest resources and associated lands should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations.

Furthermore, growing public awareness of forest destruction and degradation has led consumers to demand that their purchases of wood and other forest products will not contribute to this destruction but rather help to secure forest resources for the future. In response to these demands, certification and self-certification programs of wood products have proliferated in the marketplace.

The Forest Stewardship Council (FSC) is an international body which accredits certification organizations in order to guarantee the authenticity of their claims. In all cases the process of certification will be initiated voluntarily by forest owners and managers who request the services of a certification organization. The goal of the FSC is to promote environmentally responsible, socially beneficial and economically viable management of the world's forests, by establishing a worldwide standard of recognized and respected Principles of Forest Stewardship.

The FSC's Principles and Criteria (P&C) apply to all tropical, temperate and boreal forests, as addressed in Principle #9 and the accompanying glossary. Many of these P&C apply also to plantations and partially replanted forests. More detailed standards for these and other vegetation types may be prepared at national and local levels.

The P&C are to be incorporated into the evaluation systems and standards of all certification organizations seeking accreditation by the FSC. While the P&C are mainly designed for forests managed for the production of wood products, they are also relevant, to varying degrees, to forests managed for non-timber products and other services.

The P&C are a complete package to be considered as a whole, and their sequence does not represent an ordering of priority. This document shall be used in conjunction with the FSC's Statutes, Procedures for Accreditation and Guidelines for Certifiers.

FSC and FSC-accredited certification organizations will not insist on perfection in satisfying the P&C. However, major failures in any individual Principles will normally disqualify a candidate from certification, or will lead to decertification. These decisions will be taken by individual certifiers, and guided by the extent to which each Criterion is satisfied and by the importance and consequences of failures. Some flexibility will be allowed to cope with local circumstances.

The scale and intensity of forest management operations, the uniqueness of the affected resources, and the relative ecological fragility of the forest will be considered in all certification assessments. Differences and difficulties of interpretation of the P&C will be addressed in

⁴ Information supplied by the Forest Stewardship Council-U.S. (FSC-U.S.). For further information, please contact FSC-U.S. directly at 202/342-0413.

national and local forest stewardship standards. These standards are to be developed in each country or region involved, and will be evaluated for purposes of certification, by certifiers and other involved and affected parties on a case by case basis.

If necessary, FSC dispute resolution mechanisms may also be called upon during the course of assessment. More information and guidance about the certification and accreditation process is included in the FSC Statutes, Accreditation Procedures, and Guidelines for Certifiers.

The FSC P&C should be used in conjunction with national and international laws and regulations. FSC intends to complement, not supplant other initiatives that support responsible forest management worldwide.

The FSC will conduct educational activities to increase public awareness of the importance of the following:

- improving forest management;
- incorporating the full costs of management and production into the price of forest products;
- promoting the highest and best use of forest resources;
- reducing damage and waste; and
- avoiding over-consumption and over-harvesting.

The FSC will also provide guidance to policy makers on these issues, including improving forest management legislation and policies.

PRINCIPLES AND CRITERIA

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.

- 1.1 Forest management shall respect all national and local laws and administrative requirements.
- 1.2 All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.
- 1.3 In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.
- 1.4 Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.
- 1.5 Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.
- 1.6 Forest managers shall demonstrate a long-term commitment to adhere to the 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.

- 2.1 Clear evidence of long-term forest use rights to the land (e.g. land title, customary rights, or lease agreements) shall be demonstrated.
- 2.2 Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.
- 2.3 Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.

PRINCIPLE #3: INDIGENOUS PEOPLES' RIGHTS

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

- 3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.
- 3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.
- 3.3 Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.
- 3.4 Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.

PRINCIPLE #4: COMMUNITY RELATIONS AND WORKER'S RIGHTS

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

- 4.1 The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.
- 4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.
- 4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organisation (ILO).
- 4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups directly affected by management operations.
- 4.5 Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.

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.

- 5.1 Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.
- 5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.
- 5.3 Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.
- 5.4 Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.
- 5.5 Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.
- 5.6 The rate of harvest of forest products shall not exceed levels which can be permanently sustained.

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.

- 6.1 Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.
- 6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.
- 6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:
 - a) Forest regeneration and succession.
 - b) Genetic, species, and ecosystem diversity.
 - c) Natural cycles that affect the productivity of the forest ecosystem.
- 6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.
- 6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.
- 6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain

biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.

- 6.7 Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.
- 6.8 Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.
- 6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.
- 6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:
 - a) entails a very limited portion of the forest management unit; and
 - b) does not occur on high conservation value forest areas; and
 - c) will enable clear, substantial, additional, secure long term conservation benefits across the forest management unit.

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.

- 7.1 The management plan and supporting documents shall provide:
 - a) Management objectives.
 - b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.
 - c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.
 - d) Rationale for rate of annual harvest and species selection.
 - e) Provisions for monitoring of forest growth and dynamics.
 - f) Environmental safeguards based on environmental assessments.
 - g) Plans for the identification and protection of rare, threatened and endangered species.
 - h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.
 - i) Description and justification of harvesting techniques and equipment to be used.
- 7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.
- 7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.
- 7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.

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.

- 8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations as well as the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.
- 8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:
 - a) Yield of all forest products harvested.
 - b) Growth rates, regeneration and condition of the forest.
 - c) Composition and observed changes in the flora and fauna.
 - d) Environmental and social impacts of harvesting and other operations.
 - e) Costs, productivity, and efficiency of forest management.
- 8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."
- 8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.
- 8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.

PRINCIPLE # 9: MAINTENANCE OF HIGH CONSERVATION VALUE FORESTS

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

- 9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.
- 9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.
- 9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.
- 9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.

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.

- 10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.
- 10.2 The design and layout of plantations should promote the protection, restoration and conservation of natural forests, and not increase pressures on natural forests. Wildlife corridors, streamside zones and a mosaic of stands of different ages and rotation periods, shall be used in the layout of the plantation, consistent with the scale of the operation. The scale and layout of plantation blocks shall be consistent with the patterns of forest stands found within the natural landscape.
- 10.3 Diversity in the composition of plantations is preferred, so as to enhance economic, ecological and social stability. Such diversity may include the size and spatial distribution of management units within the landscape, number and genetic composition of species, age classes and structures.
- 10.4 The selection of species for planting shall be based on their overall suitability for the site and their appropriateness to the management objectives. In order to enhance the conservation of biological diversity, native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.
- 10.5 A proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover.
- 10.6 Measures shall be taken to maintain or improve soil structure, fertility, and biological activity. The techniques and rate of harvesting, road and trail construction and maintenance, and the choice of species shall not result in long term soil degradation or adverse impacts on water quality, quantity or substantial deviation from stream course drainage patterns.
- 10.7 Measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. Integrated pest management shall form an essential part of the management plan, with primary reliance on prevention and biological control methods rather than chemical pesticides and fertilizers. Plantation management should make every effort to move away from chemical pesticides and fertilizers, including their use in nurseries. The use of chemicals is also covered in Criteria 6.6 and 6.7.
- 10.8 Appropriate to the scale and diversity of the operation, monitoring of plantations shall include regular assessment of potential on-site and off-site ecological and social impacts, (e.g. natural regeneration, effects on water resources and soil fertility, and impacts on local welfare and social well-being), in addition to those elements addressed in principles 8, 6 and 4. No species should be planted on a large scale until local trials and/or experience have shown that they are ecologically well adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems. Special attention will be paid to social issues of land acquisition for plantations, especially the protection of local rights of ownership, use or access.
- 10.9 Plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly of such conversion.