

SUSTAINABLE DEVELOPMENT

## Forest Sustainability Issues and Certification Activities since UNCED

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In the dialogue leading up to the U.N. Conference on Environment and Development (UNCED) in 1992, international concern about the state of the world's forests focused on three challenges: the overall rate of deforestation and associated losses of environmental, economic, and social benefits; associated threats to forest dwellers around the world; and increased demand for forest products from sustainably managed forests. Most of the concerns coming out of the "Earth Summit" in Rio ultimately related to the concept of forest "sustainability."

In the intervening ten years, concern for the plight of the forest dwellers has continued. In fact, the focus of the Center for International Forestry Research (CIFOR), which is a research institution of the World Bank, has now become forests and the poor.

The other concerns have been redirected. Although the focus prior to Rio was largely on the sustainability of the forests of the developing world, primarily tropical forests, delegates generally failed to distinguish between the situation in the tropics, where deforestation was substantial, and that of temperate and high-latitude, or boreal, forests of the Northern Hemisphere, with their net increase in forest area. Today, even though tropical deforestation is still occurring, albeit perhaps at a somewhat reduced rate, much of the post-Rio attention has been deflected to temperate forests, where modest reforestation continues as in much of Europe. Emphasis has shifted to concerns over the extent to which these northern forests are maintained in relatively undisturbed condition; logging practices, such as clear-cutting and the logging of old-growth; and on sustainability.

Sustainable management of forests, identified as a priority in Rio, has evolved at several levels. At the intergovernmental level, it has been manifest in a number of international understandings and declarations. At the national level, many countries have recently revised or modified their forest practices policies. At the private level, forest management auditing and certifying groups have emerged, forests are now being certified, and some products made from "certified" wood now bear "ecolabels." Most of the certification activity is occurring in the developed temperate countries, where forest management is practiced and preexisting institutions allow for relatively easy monitoring.

Certification of sustainable forest management is now widely embraced by environmental groups and producers alike. As a result, timber harvesting is generally viewed as acceptable when done "sustainably," and that marks a major change in society's perceptions and attitudes toward timber harvesting.

A second important change since Rio is the broader recognition, particularly by environmentalists, of the positive role that planted forests can play in promoting conservation and forest protection. The transition to planted forests and, particularly, high-yield, intensively managed forests began in earnest in the 1970s and 1980s. For the forest industry, this cropping approach, similar to that used in agriculture, makes sense if the financial returns can compete with those from harvesting natural forests. The commercial success of planted forests and intensive management has led to their widespread establishment.

Although plantations were initially opposed by the environmental community because they were thought to be displacing natural forests, resistance is fading as it becomes apparent that they offer an alternative source of fiber. Plantations can reduce harvesting pressure on natural forests, thereby allowing land with important nontimber values to be dedicated to other uses, including conservation. The major forest certifiers now certify management practices in plantations as well as in natural forests.

In the United States, the dominant forest issue after Rio was a continuation of the debate over management and harvests of natural and old-growth forests, particularly in the Pacific Northwest with its populations of the northern spotted-owl, a threatened species. Since most of the old-growth forests are in the public domain, the controversy spotlighted the management and harvest levels of publicly owned forestlands. Over the past 15 years, harvests in the U.S. national forests have declined by 85%.

### ***Rio 1992: Consensus without Clarity***

At Rio in 1992, some temperate countries took a cautious approach to forest issues, and tropical countries objected strongly to any binding proposals on forests that might be viewed as an infringement on their sovereignty. Eventually, the 178 nations agreed to a broad agenda to address environmental and development issues.

The Statement of Principles on Forests that emerged from Rio reflected a global consensus on a set of nonbinding principles of management, conservation, and sustainable development for all types of forests. The discussion and documents also broached some specific management issues, such as forest certification and ecolabeling. For example, Agenda 21 encouraged “expansion of environmental labeling and other environmentally related product information programs designed to assist consumers to make informed choices.” This sort of loose consensus on forest sustainability allowed for voluntary compliance and flexibility in selecting specific policy options.

At UNCED, world leaders agreed to form the U.N. Commission for Sustainable Development (UNCSD), to follow up on the Rio initiatives. UNCSD comprises 53 representatives elected from U.N. member countries. UNCSD, in turn, established the Intergovernmental Panel on Forests (IPF), which was followed by the Intergovernmental Forum on Forests (IFF), a forum for addressing the process of formulating agreements on sustainable forestry. Independent from UNCSD, Malaysia and Canada jointly sponsored an Intergovernmental Working Group on Forests, a forum for addressing North-South, tropical-temperate country differences.

One of the major outcomes of the Earth Summit was the industrial world’s agreement that sustainable forestry should be practiced by all countries, both tropical and temperate. That agreement ironically shifted the focus from tropical countries, which had been the locus of serious deforestation concerns in the 1980s, to the industrial countries, where the area of forest had not just been stable but was even experiencing modest net growth. The earlier focus on certification of tropical forests and problems of tropical deforestation seems to have receded. Similarly, concern about acid precipitation forest dieback abated as evidence mounted that most of the observed dieback was due to other factors.

In response to international and domestic concerns, some temperate-region countries have changed their forestry laws and policies to improve water quality, protect biological diversity, and implement less intensive silvicultural treatments. Some of these policies are regulatory; others rely on tax or other incentives. Still others are driven by the market, where wood prices have been soft thereby discouraging more costly intensive management. In many temperate forested countries, significant revisions have been made in the legal and institutional framework dealing with forest matters. Following the Earth Summit, many international activities, both public and private, were organized around forest sustainability issues.

Exactly what constitutes a sustainable forest has yet to be precisely determined, however. Common criteria typically use ecological, social, and economic factors. That no single definition exists is not surprising, given the varying interests and objectives of the world's nations, stakeholders, and interest groups. Even today, the various auditing organizations differ in their approach and emphasis. It is noteworthy that initially, management was certified for its "sustainable forest management practices." However, the definition of what is sustainable is sufficiently vague that the phrase "harvested from a well-managed forest" has been substituted. Flasche (1997, see Further Readings) was probably correct when he characterized today's sustainable forestry as more a philosophy of how forest should be cared for than a definable condition of the forest or a set of acceptable management practices.

### ***International Criteria and Indicators***

In Europe in 1993, six criteria for characterizing sustainable forests were identified by the Helsinki Process and endorsed by the parties to the Ministerial Conference for the Protection of Forests. For non-European temperate forest countries, a series of discussions that became known as the Montreal Process led to the Santiago Declaration of 1995. The Santiago Declaration, like the Helsinki Process, contains a set of criteria and indicators endorsed by the participating countries. The seven criteria for sustainable forest management cover biodiversity conservation, ecosystem productivity, ecosystem health and vitality, soil and water conservation, global carbon cycles, multiple socioeconomic benefits, and legal, policy, and institutional frameworks. Both approaches provide for voluntary compliance.

IPF, and later IFF, attempted to sort out the conflicting views on several global forest issues. One is the need for a global convention to create a set of legally binding provisions on forests. Opinion is divided on the usefulness of such a convention, and whether countries will agree to binding agreements on managing their sovereign forests. It is unlikely that a forest convention will occur within the next several years.

### ***Private and Quasi-Private Certification***

The certification of on-the-ground forest practices that meet certain standards consistent with sustainable forestry marks a major change since the Earth Summit. Certification has been led largely by private initiatives and includes both programs set up by the environmental community and those emerging from forest owners and the forest industry. Although some of the earliest certification efforts were undertaken by forest owners, the World Wildlife Fund (WWF) and the Forest Stewardship Council (FSC) gave the movement a strong impetus.

Certification is predicated on the notion that markets will pay a premium for certified (and labeled) wood. A chain-of-custody must be established to ensure that only certified wood is used for ecolabeled products. It is the promise of a price premium that will justify the additional costs associated with certifiable management. Although the price premium rarely occurs, many producers participate because they believe certification is necessary to insure their produce will receive general acceptance, for altruistic reasons, and to generate public "good will."

Over the past decade a number of organizations have emerged with alternative approaches to setting and certifying forest management standards. WWF's early initiative created the Forest

Stewardship Council (FSC), which has undertaken an aggressive forest certification campaign. FSC both establishes the standards and selects the auditors that determine whether a firm's on-the-ground forestry practices are consistent with the criteria.

In some countries and regions, forest industry has established auditing organizations that compete with FSC: the Sustainable Forestry Initiative (SFI) of the American Forest & Paper Association in the United States; the Canadian Standards Association in Canada; and the European Pan Forest Council (EPFC) in much of Europe. Additionally, there are local and regional certification systems, such as the Nordic Forest Certification System and the Finnish Forest Certification System.

Some of these organizations recognize each other's certification (see SFCW 2000), but there currently exists a large degree of "brand" competition among certifiers and the approaches differ somewhat. For example, whereas FSC requires each forest to be audited separately (which can be very costly for small forest owners), EPFC allows European forest cooperatives to audit only a sample of the individual firms.

International organizations are also becoming involved in forest certification. The International Standards Organization (ISO) has for some time assessed management systems and their ability to deal with specific problems. For example, environmental standards were already covered by the ISO 9000 series. Now ISO has created a standard for forestry, the ISO 14000 series. Unlike the other forest auditing organizations, which certify management practices, ISO certifies management *systems*, the logic being that if a management system is appropriate, the practices will be as well.

FSC and ISO, in principle, cover all forest regions. EPFC potentially covers European countries; the SFI applies to the United States and could be applied in Canada and elsewhere. Some type of forest auditing is thus available everywhere. Given the number of forest-auditing organizations and the relatively large numbers of forest owners, the different features have often resulted in stiff competition among auditors and certifying organizations.

### ***The Political Economy of Sustainable Forestry***

How would a system of sustainable forestry involving certification, affect the competitive position of industrial wood producers? The answer depends upon the changes in forest management required and their cost, the costs of the auditing, and the costs associated with maintaining a chain-of-custody for certified wood. It is likely that management practices leading to certification would increase some forest manager's costs over those of competitors, both certified and noncertified, elsewhere. This could result in a restructuring of production costs thereby placing certified but high cost producers at a competitive disadvantage.

If the wood from both certified and noncertified firms is processed in the same mill, maintaining a chain-of-custody for the certified wood will usually involve additional costs. Conversely, chain-of-custody problems are lessened where all wood is certified. In fact, resistance to FSC and its auditing of individual ownerships seems strongest in countries with large numbers of small ownerships.

Additionally, because there are scale economies for auditing large organizations, auditing costs are likely to be vastly higher per unit of output for small firms. Thus, countries that have large numbers of separately managed small ownerships, such as Finland, France, and the United States,

are likely to have higher per-unit costs than countries where forest ownership is more concentrated, such as Canada or Poland. In some European countries, such as Sweden, large firms have accepted FSC certification, but the smaller firms are leaning toward EPFC, which allows for regional certification at lower per-unit costs.

### ***Dynamics: A Changing Situation***

The standards for certification are changing. This is not surprising: we have a new product, and it is being adapted to the needs of the consumers—the forest producers who implement the management standards, environmental groups, and the purchasers of the ecolabeled products. Naturally, some consumers would make the standards for sustainable management and certification easier; others push for more stringent standards.

Implementation of the standards is also changing. For example, the original idea was that FSC would certify forests as “sustainability managed.” As noted above, this term was later changed to “well managed” when the lack of definitive sustainability criteria became apparent. Similarly, other certification systems have undergone changes. In the United States, adjustments are being made in industry’s SFI approach, under which signatory companies agree to strive to meet certain forest management practice standards. Originally, SFI set guidelines intended to avoid third-party auditing and certification, on the theory that if some companies had third-party audits, all would be forced, *de facto*, to undergo independent audits. Nevertheless, some participants’ desire for the legitimacy of an external review has led to a provision for voluntary third-party auditing. Additionally, firms that have incurred the costs of meeting the standards now seek certification as proof of their compliance.

The large certifying organizations’ lack of flexibility and unwillingness to lower auditing costs for small firms may be encouraging the emergence of alternative certifying groups. In Europe, for example, EPFC offers small forest landowners a low-cost certification based on commonly practiced management across ownerships (usually in cooperatives), without requiring that individual ownerships be audited separately.

The changes in forest management criteria and certification procedures are problematic for firms that have already committed to one organization’s certification—and troublesome for FSC. In response to the calls for more tailored standards and guidelines, FSC has abandoned its former one-size-fits-all international approach and developed regionally specific standards. For previously audited firms, however, problems arose.

An interesting case involves J. D. Irving, a Canadian forest company that had received FSC certification for its timber holdings in Canada and the United States. When FSC standards were modified to reflect local conditions, Irving faced additional requirements for the Maritime Provinces. Irving said the costs of meeting the new standards for this region would put its Canadian operations at a competitive disadvantage and called the new standards needlessly restrictive.

Yet to be resolved are other, potentially more critical issues that similarly reflect the problems of imposing standards on a dynamic and evolving forest industry. For example, FSC must consider whether it ought to certify planted forests. In general, its guidelines accept planted forests, but differences in standards among regions appear to create competitive advantages and disad-

vantages, and the standards themselves have been called questionable from the viewpoint of sustainable forestry.

Another issue is technological change, particularly biotechnology. Although for commercialization transgenics must go through a government supervised deregulation procedure, some certifying groups, including FSC, prohibit the use of genetically modified organisms, or transgenic trees, in certified forests. Although transgenic trees are still in the development stage, their acceptance for certification promises to be a contentious future issue.

Finally, there is the question of how much certified fiber a product must have to qualify for ecolabeling. Recently, FSC reduced its requirement for certified solidwood products from 100% to 70% (SFCW 2000). Similar content issues exist for chip and paper products.

## ***Outcomes***

Virtually all the temperate forest countries have participated in international discussions and entered into nonbinding agreements related to sustainable forestry. Many countries have also instituted changes in their regulatory and institutional oversight of forest management activities in recent years. Nongovernmental programs, including forest certification, are being promoted. All these developments have significant implications for competitiveness among suppliers of temperate forest products in world markets.

One distressing aspect of the sustainable forestry effort is the focus on the developed countries and the relative lack of focus on the forests of the developing world. Although UNCED was convened largely because of global concerns about tropical deforestation, much of the attention since Rio has been focused on temperate forested countries, countries that account for more than 80% of the world's industrial roundwood production and global trade in wood and paper products. A concern expressed by Cote (1999, see Further Readings) is that the *de facto* focus on the developed world, which has relative modest problems of sustainable forest management, has led to largely ignoring the much more substantial problems of the developing world, where sustainable forest management is rarely practiced.

Generating consistent and equitable standards across regions is truly a Herculean task. Some have argued that sustainable forestry is not even possible in large parts of the tropics, and the efficacy of certification as a vehicle to improve the world's forests has not definitively been established. Although it may improve practices in forests that are certified, it does nothing to improve other forests. Additionally, if the costs of sustainable certifiable management prove prohibitive, they may create perverse incentives to convert forestland to other uses, such as pasture. Such an outcome cannot claim to have improved the world's forests.

Furthermore, the ability of ecolabeled products to command prices high enough to justify the improved practices is still problematical. One forest products company estimates that only a small fraction of its certified wood receives a price premium in the market. Certification is not an indication of wood quality but an indication of production practices, and the quality of the wood from certified forests varies. The demand for "green" pallets, for example, is likely to be small.

## Conclusions

The issue of sustainable forestry has grown in importance since it was emphasized at Rio. Forest audits and forest certification are not a passing fad but an important part of the forest management process. The structure of this new industry is uncertain, however. As competing programs struggle for a share of the market, forest owners and managers—those most sensitive to costs when adopting new standards—will certainly play an important role in this process by their choice of auditing organization. Public perceptions of the adequacy and legitimacy of the various systems in addressing citizens' concerns about forest management will be important as well.

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