

Forest certification and biodiversity

Certification can play an important role in biodiversity conservation, but perhaps not in its current form

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DEFORESTATION, whatever its causes and motivation, is the most powerful direct threat to forest biodiversity. As currently practised, timber harvesting, although a long way behind in the directness or totality of its effects, is among the next most serious of threats. The conservation of biodiversity is, therefore, best met by halting deforestation and keeping commercial timber production out of the forests. This is the principle underlying the reservation of totally protected areas (TPAs).

However, few countries are willing or able to place all their natural forests in TPAs. Most, under present conditions, have no choice but to continue encouraging the industrial utilisation of the timber growing in their natural forests because of the income and employment this provides. Conventional wisdom holds that biodiversity can also be conserved in these production forests provided that the forest is under sustainable forest management (SFM), a fact that can be conveyed to consumers through certification. We argue here that the role of certification—as it is currently envisaged—in biodiversity conservation will be limited, although in slightly different forms it may eventually become an important tool for such conservation.

Biodiversity and SFM

The Convention on Biological Diversity defines biodiversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and other ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”. Forests, and tropical forests especially, are the largest repositories and protectors of terrestrial biodiversity; tropical forests are said to harbour fully half the Earth’s terrestrial biodiversity. Many ecologists refer to ‘landscape-scale’ processes in assessing the role and conservation of biodiversity, where the landscape is seen to comprise several ‘ecosystems’ and where different components of the landscape are managed in different ways.

ITTO’s Guidelines for the Conservation of Biological Diversity in Tropical Production Forests suggest that there will be some *allowable* loss of biodiversity in tropical production forests that would be mitigated by a comprehensive and integrated TPA network. The function of production forests in biodiversity conservation would then be twofold: first, good forest management for the production of timber (and other goods and services) would allow the persistence and flourishing of a large (but unspecified) portion of the original biodiversity; second, the production forest would act as a buffer around the TPAs and provide corridors that allow the free flow of genetic material between them.

Forest certification

Certification of forest management has been defined as an attempt to link green consumers to producers who are

seeking to improve their forest management practices and obtain better market access and higher revenue by providing an independent assessment of forest management operations. Certification under a given scheme gives producers the right to use a trademarked label to provide consumers with information on the quality of the forest management that gave rise to the timber products they wish to purchase. Armed with this information, consumers are able to choose between certified and non-certified timber products and may be prepared to pay a premium for certified timber products. Ultimately, the idea is that timber producers, processors and traders, faced with the potential loss of markets, and with the possibility of financial incentives, will adopt SFM or make sure that it is adopted by their suppliers so that they can use certification as a marketing device. In this way, forest degradation will be halted in certified forests.

Forest certification has expanded at a rapid pace since its beginnings in the early 1990s. In January 2002, about 109 million hectares had been certified (see page 3), but the total volume of certified timber available on the market from this area has not been reliably estimated.

Given the high level of biodiversity in tropical forests, the role of certification in biodiversity conservation hinges to a large extent on its success in the tropics. However, certification is currently at the margins there: according to Eba’a Atyi and Simula (2002), 6.5 million hectares of forest had been certified in ITTO producer (tropical) countries by January 2002; this comprises 4.2 million hectares certified by the Keurhout Foundation and 2.3 million hectares by the Forest Stewardship Council (FSC). An estimated one-third of the tropical forest area certified by the FSC consists of plantations; all those certified by Keurhout are natural forests.

Certification

In the initial stages of certification development, the target of concern was the international trade in tropical timber. However, the effect of this trade on biodiversity loss cannot be at all significant, with less than 10% of the industrial roundwood harvested annually from the world’s forests entering the international trade; of this, no more than about 10% originates in tropical forests. Measures directed at that trade cannot, therefore, be much more than a marginal direct influence in promoting sustainable (or better) forest management.

Export markets for industrial timber are dwarfed by domestic markets within the tropical countries themselves, where there has been little evidence to date of demand for certified timber. Moreover, harvesting for fuelwood and charcoal dwarfs that for industrial timber in most tropical countries. An extreme example is in the Democratic Republic of Congo, where it is estimated that around 46 million m³ of fuelwood are harvested each year, compared to less than a quarter of a million m³ of industrial roundwood.

In the tropical countries as a whole, harvesting for fuelwood accounts for an estimated 77% of the total wood volume harvested annually (FAO 2001); such harvesting is not currently affected by certification and is unlikely to be affected in the foreseeable future.

Measuring biodiversity for certification

The measurement of biodiversity and the effects of management on it are still hugely problematic—as reflected in the vagueness of performance standards for biodiversity-related criteria—and therefore provides ample room for argument and controversy, not to mention the risk of undetected loss of biodiversity in the forest itself. Feedback from a series of ITTO-funded training workshops on using the Organization's Criteria and Indicators for Sustainable Forest Management suggests that even rudimentary information on biodiversity is lacking at the forest-management-unit level in the tropics. Thus, it is probably impossible to determine the direct benefit of improved (or certified) forest management on biodiversity because this benefit cannot yet be reliably measured in forestry operations.

Certification's role in SFM

There is some evidence to suggest that certification has had an influence in improving forest management standards, at least in certified forests and forests in the process of being certified. In Bolivia, for example, substantial efforts have been undertaken to improve forest management to the extent necessary for certification under the FSC. Certification can provide encouragement—including the provision of technical assistance and possibly commercial incentives through its marketing potential—to some companies and landowners to improve their forest management practices. However, certification has tended to exclude small forest enterprises in the face of problems related to cost, compliance with standards, and access to the certification process.

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To be useful in biodiversity conservation, SFM must be part of a national land-use strategy which assigns appropriate attention to biodiversity conservation and integrates timber production and TPA areas in a way that maximises the contribution of both to biodiversity conservation. Certification does not appear to be a driver for the planning and implementation of such a land-use strategy; certificate holders, for example, are not generally expected to show proof that their harvest patterns contribute to a sustainable landscape. Certification standards can be developed to address this shortcoming and certification is certainly one tool in a broader array of strategies that can be deployed to contribute to biodiversity conservation at the landscape

scale. But it is difficult to see it as a driver for landscape-scale conservation measures.

Perhaps the most tangible benefit of certification to date has been its contribution to transparency. The independent auditing of forest operations increases the information available on forest operations; the act of opening a company's—or a nation's—operations to scrutiny is in itself an important step towards transparency and therefore towards SFM.

Certification as potential market barrier

According to many ITTO producer member governments, the exclusion of non-certified timber from markets discourages SFM by reducing the trade in tropical timber and therefore the export revenue earned by developing countries. Fewer resources would then be available with which to build capacity for SFM; this would create a vicious circle of fewer incentives leading to diminished efforts towards SFM, which would make certification even more difficult to obtain.

The cost of improving management

Technically, SFM can be done—provided that all stakeholders agree to an allowable level of impact on forest values, including biodiversity, and provided that the inevitable impact on biodiversity in the production forests does not reduce the productivity of that forest. There are conflicting data on the relative cost of reduced impact versus conventional logging, with some studies finding slight decreases in cost (due mainly to increases in efficiency and less wood wastage) and others finding higher costs (due to the need for extra training, higher standards of road-building, etc). It seems, though, that the low level of reduced impact logging (RIL) uptake in the tropics is prima facie evidence that it is either more expensive or that any potential financial advantages are outweighed by other considerations. Even if RIL were universally cheaper than conventional logging, which seems unlikely, it is only one element of SFM: there will be further impacts on profitability as timber yields are reduced in line with sustainability. Such impacts probably won't be offset by higher prices for certified timber. According to Eba'a Atyi and Simula (2002), there is little likelihood that certified timber will command a price premium in the market “in the long run”.

Timber values

The existing global plantation resource and the standing natural temperate forests in Canada, Russia and elsewhere already have the ability to supply, within the next 10–15 years, a greatly expanded proportion of the world demand for wood, with the potential to create regional ‘gluts’ of wood. This wood will have several cost advantages over wood grown in sustainably managed natural tropical forests and is likely to out-compete it in many uses. The price of timber, already depressed, will probably remain low, but

the cost of natural tropical forest management (under SFM regimes) will almost certainly grow. Even if the tropical natural forest-based timber industry continues, it will only be able to compete if it keeps its costs as low as possible, constraining efforts towards SFM. Moreover, SFM is not just competing with unsustainable logging or the looming 'plantation effect', it is competing with an entire suite of alternative land uses. The incentives for cash crops such as soybeans, oil palm and many others are significant, and the disincentives for SFM, including a relatively low profitability, the need for such high standards of environmental performance, and the costs of certification, make the choice between natural forest management and forest conversion very easy for many landowners and developers.

The relevance of certification to biodiversity

It is hard to avoid the conclusion that the economic forces at work—such as the potential glut of timber on world markets, the low economic development in many tropical timber producing countries and therefore a lack of interest in certification in domestic markets, and the attractiveness of alternative land uses—will overwhelm any potential impact of forest certification (in its present form) on biodiversity conservation.

If the prediction of increasing availability and consumption of plantation timber is realised, more natural forests in developed countries are likely to be removed from timber production. This will have a positive effect on biodiversity conservation because most such countries will be able to meet the costs of forest protection for the (generally) non-marketable services they provide. Conversely, the biodiversity of the tropical forests will be even more at risk than they are today because the prospects for sustainably managed production forests, which would form the basis of a landscape-scale biodiversity conservation strategy, will diminish with decreasing financial viability, and the risk of wholesale clearance will increase.

High-value markets

The key task, therefore, appears to be to find innovative ways of increasing the financial value of natural tropical forests. One option is to supplement the revenues generated by SFM for timber and non-timber products by direct payments for other, global, goods and services, particularly biodiversity conservation and carbon storage. Certification could play an important role here by providing independent verification that biodiversity conservation or carbon management standards are being met. A prerequisite for 'global' funding in such situations would be the implementation of landscape- and regional-scale biodiversity conservation plans, within which the production forests could form a significant part.

Another strategy is to pursue markets for high-quality, high-value timber. Tropical forests grow a few timbers with decorative or durability qualities of sufficiently high

appeal to give them an effective demand with relatively high and inelastic price ceilings. The fast-grown commodity timbers of the existing plantations are no substitute for them, even allowing for the technological advances in sight. Competitive advantages of this calibre offer a strong base on which to develop high-value end-markets and to capture a large part of a forest's economic rent within the country of origin. Certification would be necessary to guarantee to consumers that the timber they are buying is from a sustainably managed source. However, given the limited distribution of such species, this strategy may not work in a large part of the tropical forest estate.

The 'high-value' option is likely to have a relatively low environmental impact because of the low density of such species in the forest, but management

to favour such species (and prejudice others) would be viewed dimly by some and would have its own implications for biodiversity conservation. This points to one of the key questions that certification proponents still need to answer: how much biodiversity loss can be tolerated before forest management does not qualify for certification? This question is relevant to the fundamental economic problem: the lower the standard that has to be met, the lower the additional cost incurred to achieve SFM and the lower need be the additional payments for global services. 'How much biodiversity loss is acceptable?' is therefore a key question that must be answered as the search continues for effective tropical forest conservation mechanisms.

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References

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