

Abstract

In today's market-based economy a struggle exists between the need to conserve our limited natural resources and the need for economic welfare and stability. Green certification for forest products was developed to provide an avenue for producing forest goods in a sustainable manner within the current capitalist system. Through the use of "eco-labels" and, in theory, the subsequent education of the consumer, he or she can factor forest management, timber and non-timber harvesting methods, and production standards into purchasing decisions, thereby potentially increasing the demand for sustainably produced goods. However, there is still much debate about the feasibility of green certification, its marketability, and its impact on forest management and on ecological, economic, and social welfare as a whole. This paper argues that, although forest management practices may meet the criteria outlined by the certifying body, green certification fails to achieve long-term sustainability.

Introduction

Within the last 30 years, as our natural resources have become increasingly scarce with rising levels of consumption, there has been a growing concern over management on both public and private lands. Green certification for sustainably managed forests has been heralded as a way to promote a more holistic, ecosystem-based concept of forest management. "Eco-labeling," one direct result of green certification, can provide the missing link of knowledge between the consumer and the

good. Such certification serves to educate the consumer about the origin of the forest product. Although on the surface this may seem to be a viable solution in creating a market incentive through the addition of “green premiums,” the ability for this to generate its desired result of promoting sustainable forest management is still being debated.

This paper argues that while the *potential* for green certification to achieve sustainable forest management practices exists, it ultimately fails to achieve system sustainability. Green certification does not directly address rising consumption levels, increasing energy demands in a global economy, or the economic paradigm that growth is equal to health, all of which threaten long-term sustainability. But before further discussion of the viability of green certification and its effect on sustainability of the system, it is important to understand the history of certification, and what the certification process entails.

Origins of Green Certification

As awareness of the rapid deforestation occurring in tropical forests increased during the 1980's, the idea of green certification was developed as a method to slow this rampant natural resource depletion (Vogt *et al.* 2000: 12). Looking back even further, one may point to the general environmental movement of the 1960's and 1970's, with the development of such legislation as the Endangered Species Act, the Clean Water

Act, and the National Environmental Policy Act, for creating the climate in which people could recognize the need for green certification. However, if one were to look for a specific point in time in which green certification materialized, it is argued that certification stems from the 1992 United Nations Conference on Environment and Development, where participants “called for formulation of scientifically based criteria and indicators of management, conservation and sustainable development,” including an agreement on “non-binding” principles of forest management (Stevens *et al.* 1998: 43). Although it is necessary to look at tropical deforestation as an ecological cause for the development of green certification, it is also imperative to evaluate the economic system under which such extensive deforestation can occur.

Green certification was developed as a market-based incentive to promote sustainable forest management (qtd. in Carter and Merry 1998: 23). But up until recently, why has there not been an institutionalized incentive for more ecologically based forest management? This can be explained, in part, by taking a closer look at our current, market-based economic system. This system places no value upon positive externalities, such as cleaner air, improved water quality, wildlife habitat, and aesthetic attributes, to name a few, provided by a healthy forest, because it can only function properly with excludable goods or goods that can be exclusively owned by an individual (Farley and Daly 2003: 61).

Because these positive externalities go unrecognized and unrewarded, there is no intrinsic way, in a pure market context, to promote sustainable and ecologically oriented management of forest systems; no reward provided for those who produce public goods such as those aforementioned. Certification allows the “market capture” of the public goods inherent in sustainable forest management through the creation of a market for green products, thereby placing the choice of supporting sustainable land-use in the hands of the consumer.

Overview of Certifying Bodies

According to Kristiina Vogt and Anna Fanzeres of Yale University’s School of Forestry and Environmental Studies, there are two primary types of certification. They can be characterized as either “systems-based,” a method of certification which focuses on the creation and implementation of a management process which determines environmental performance over time and “performance-based,” a method of certification which ensures that a specific set of pre-defined standards are met. Although these types are defined as being distinct from one another, they are often used in combination within the industry (2000: 35).

Within these types, there can be first, second, and third party certification. First party certification occurs when a forest practitioner claims to be using sustainable management techniques. Alternatively, if the certifying agent is an organization that

represents the forest products industry, this would be deemed second party certification. Finally, when a neutral, independent organization is responsible for the certifying process, it would be labeled as third party certification (Stevens *et al.* 1998: 43, 44). In order to ensure accountability and to gain public support, there has been a general shift away from first and second party certification, towards third party certification.

Another differentiating aspect of forest certification bodies is whether or not a chain of custody is required. Because wood from a certified forest typically travels a great distance between its harvest to its manufacture and on to the store, providing a chain of custody informs the processor or consumer of the origins of the wood.

The Certification Process

The certification process can be as short as 6 months but will more likely take between 12 and 18 months to complete. Most certifying bodies follow a similar set of steps when reviewing forest management practices. These steps include the *pre-assessment*, where the certification body decides if obtaining certification is a realistic goal. Next, *stakeholder consultation* provides input regarding the forest management and the degree to which it meets the outlined criteria. Following this consultation, the *main assessment* takes place where the assessment team, in conjunction with local experts, takes an in depth look at the forest management plan and practices and then makes a

recommendation regarding certification. Next during the *peer review* stage, well respected and renowned field experts evaluate the assessment report. If all the criteria are met, then certification is awarded. The certification typically lasts about 5 years, during which time the forest management is monitored to ensure compliance with certification standards (Higman *et al.* 1999: 201, 202).

Certification's Feasibility

The feasibility for forest management organizations to become certified is dependent upon several factors. In cases where ecologically sound management is already practiced, obtaining certification may be a more viable option than for organizations whose management practices would not be considered sustainable.

The costs of certification can also determine its feasibility. Costs can be divided into two categories: those costs that are direct and those that are indirect. Direct costs, the most widely studied and characterized, are those costs that are directly associated with obtaining certification. They include such things as the costs of the "initial inspection", "annual auditing" and "fixed fees like royalties" (Carter and Merry 1998: 23). These costs can vary depending upon the amount of work involved, the staff requirements, the time taken, and the size of the forest tract being certified.

Indirect costs vary more widely with the "size, volume, and nature of each forest ecosystem" as well as with the amount charged by the certifying agent (Carter and

Merry 1998: 24). Increased harvesting costs, costs associated with increased planning and monitoring, and increased management costs are all examples of indirect costs.

Because of their variability, indirect costs have been studied the least.

Large scale organizations may have an easier time absorbing these costs when compared to small scale independent foresters with a smaller land base. However, forming cooperatives of small scale foresters can sometimes alleviate some of these issues. Additionally, it is not known if green premiums are adequate to offset the costs of obtaining certification.

Discussion

Market Effects

It has been suggested that although a niche market for certified wood exists, there has not been a population-wide demand for sustainably produced goods (Mater 1995: 36). Bigsby and Ozanne attempted to determine the importance of green certification in purchasing decisions in a study based upon the responses of consumers in New Zealand when purchasing wood outdoor furniture. They found that the most important attribute was the origin of the wood: namely, whether or not it came from New Zealand. Other attributes that factored into their decision making process were possession of green certification and length of the warranty (2002: 104). A more qualitative study done by Teisl *et al.* indicated that without the presence of an eco-label,

most of the participants didn't necessarily factor environmental issues into account when making purchasing decisions, although this would change if eco-labels were present (2002: 49).

According to a study conducted by Ozanne and Vlosky in 1995, there is indeed a market and willingness to pay a premium for certified goods. However, this willingness varies depending upon the original (minus the green premium) cost of the item. Their results indicate that the higher the original cost, the lower the premium that consumers were willing to pay. Additionally, they found that, on average, approximately 37 percent of the respondents were not willing to pay any additional amount for certified goods (1997: 47).

A repetition of this study in 2000 sheds some light on the dynamics of the green market. Ozanne and Vlosky found that the "average willingness to pay a premium for certified wood products has decreased since 1995." This may be somewhat skewed however because for three of the products, the average remained the same. It was only in the products with the lowest original cost where the average actually decreased. The average for those not willing to pay remained the same (2003: 19). Despite these discrepancies, Teisl argues that overall, there has been general agreement within the industry that the market for green certified wood products is expanding (2002: 45).

Although the market for certified wood products is predicted to grow, the current number of eco-consumers is still relatively small. This leads to the idea that

forest operations in areas identified as biodiversity hot-spots or ecologically critical should be targeted for green certification which could maximize the benefits of certification for the immediate future.

With an expanding consumer-base for green certified products, there are bound to be implications for the market, therefore careful consideration must be given to the effects on market demand and supply (Carter and Merry 1998: 24). In spite of this fact, little is known about these implications. Swallow and Sedjo state,

While certification may improve the environmental sensitivity of firm-level or forest level operations, little economic analysis exists to identify whether certification might generate market feedbacks with additional positive consequences or overlooked negative consequences for ecosystem health (28).

The results of a model developed by Swallow and Sedjo, indicate the potential for adverse environmental effects that result from industry-wide eco-labeling. Their study assumes the existence of a mandatory certification system, as well as the presence of both eco-consumers (those willing to pay a green premium) and non-eco-consumers (those not willing to pay a green premium). Swallow and Sedjo explain that a decrease in aggregate demand for certified wood products could result from a decreased demand for wood products by non-eco-consumers, if this demand is not compensated by an overall increase in the demand for certified products by eco-consumers. This increase in demand by eco-consumers would have to occur despite price increases

associated with demand increases. They suggest that this scenario could lead to a “reallocation of land toward less ecologically sustainable users” (2000: 28).

The Concept of Sustainability

One of the primary goals of green certification is to promote sustainable management practices in the world’s forest ecosystems. Even assuming the existence of a sound consumer base for the market of certified products, the ability for green certification to accomplish the lofty goal of sustainability is still uncertain. According to Vogt *et al.*, the idea of sustainability is simply “too young, and the time-scale too long to adequately assess whether or not any management system is sustainable” (2000: 59). Further uncertainty and complication is added to this matter when looking at the various definitions of sustainability, including who is doing the defining, and whether creating a definition is even realistic. Vogt *et al.* argue that creating a working definition for the concept of sustainability is virtually impossible when a truly sustainable project does not even exist for use as a comparison (2000: 59).

A very general but widely accepted definition developed in 1987 by the World Commission on Environment and Development is “the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs” (Vogt *et al.* 2000: 60). Also widely accepted is the definition for sustainable forest management advocated by the International Tropical Timber Organization:

Sustainable forest management is the process of managing forests to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services, without undue reduction of its inherent values of future productivity and without undue undesirable effects on the physical and social environment. (qtd. in Higman *et al.* 1999: 4)

The latter definition provides us with a clearer view of the different components of sustainability, which include economic, ecological, socio-political and silvicultural sustainability (Vogt *et al.* 2000: 61). Within this definition is the idea of promoting not only ecological integrity or natural capital, but also the idea of expanding both social capital and human capital as well.

The Need for a Sustainable Scale

Even after a definition for sustainability is established, another problem exists—does the implementation of sustainable forestry practices translate into intact ecological integrity of the system? This second question is one of scale and may be of greater importance because of its implications for the success of green certification.

Sustainable scale can be thought of on two different levels. First, the geographic scale of production of forest products must be appropriate for the scale of their distribution. A smaller scale system, where goods are produced and distributed locally, is much more energy efficient when compared to the global economy's larger scale system in which a forest is managed in one location, value-added processing occurs at

another distant location, and then the product is distributed worldwide. For example, a person living in the U.S. buys certified wood that was sustainably grown in Indonesia, but processed in China and sold in America; the large amount of energy and resources required to ship the product half-way around the world is simply not sustainable. How certification plays out on a global scale—not only in the management of forests and the production processes for forest goods, but also in their distribution—must be addressed.

Thus, by evaluating the criteria that need to be met in order for a product to become certified, the inability for certification to address the impacts of globalization and the lack of concern for creating a sustainable geographic scale becomes apparent. Although, certification standards vary to some degree depending upon the certifying body, the FSC, which serves as an accreditor of certifying organizations such as Smartwood, is considered by many as “the back-bone of third party certification in the U.S” (Carter and Merry 1998: 25). The criteria developed by the FSC directly address aspects of sustainable forest management, from recognition of indigenous rights, to the assurance of ecologically sound management practices (see Appendix, Figure 1). However, they fail to address sustainability in the manufacturing and value-added processing of the wood. For a truly sustainable system of forest goods production, from management to manufacture, to distribution, the necessity of creating a sustainable

geographic scale must be incorporated into the certification standards or dealt with through the use of additional policy measures.

The second way sustainable scale can be viewed is in the comparison of our economic system to our ecosystem. Ecological economists emphasize the need for a paradigm shift in the field of economics, from viewing the ecosystem as a subset of the economic system, to viewing the economic system as a subset of the ecosystem. The need for this shift in thinking becomes apparent as we begin to substantially alter natural systems and use up existing resources. Cote suggests that even through the use of such measures as green certification, we may never reach our goals of sustainable management or even ecological health at a global scale under our current economic system, which encourages and even thrives on over-consumptive use of natural resources (1999: 211). Sustainability can no longer be interpreted as sustainable growth because there is simply no more room to grow in our “full-world economy” (Farley and Daly 2003: 17). Creating a sustainable scale entails matching our consumption levels to levels that can be “absorbed” by the ecosystem, where marginal costs of natural resource use do not exceed its marginal benefits.

Moving Beyond Green Certification

Green certification relies on the consumer to promote sustainably produced forest goods. Consumers who choose not to pay the green premium are rewarded

through increased public goods “subsidized” by the eco-consumer. It could be debated that it is the responsibility of government, not the private citizen, to reward the creation or maintenance of public goods and punish the destruction or degradation of them. One way in which government policy could accomplish this is through a Pigouvian system of taxation and subsidization. Under this system, government would subsidize positive externalities and tax negative externalities created in the management of forests and production of forest goods. For example, a system of taxation for non-renewable energy use in the management, manufacture, and marketing of forest products could provide compensation for negative environmental impacts.

However, there are disadvantages to the use of both taxes and subsidies. One drawback of a taxation system is the inability to predict the decrease in negative externalities brought about by any given amount of tax. Additionally, subsidies can potentially lead to increases in pollution levels through the expansion of polluting companies’ profit margins, which might encourage additional companies to pollute (Farley and Daly 2003: 378).

Conclusion

Green certification was developed to allow the “market capture” of environmentally and ecologically sound forest management practices through the use of eco-labels providing product differentiation. Consumers can then factor forest

management, timber and non-timber harvesting methods, and production standards into purchasing decisions, thereby potentially increasing the demand for sustainably produced goods.

While green certification seems to be a step in the right direction, it is by know means a solution in itself. Even with an expanding base of ecologically minded consumers, green certification may ultimately fail to achieve the goal of system sustainability. This failure stems from its inability to contend with increasing levels of consumption, an energy intensive global economy, and an economic system that relies upon infinite growth. While no system is perfect, promoting sustainable forest practices and the public goods they provide, may best be left to the realm of government.

Appendix

Figure 1—FSC Criteria for Certification (direct quote from FSC Pocket Guide)

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.
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.
3. **Indigenous People's Rights:** The legal and customary rights of indigenous peoples to own, use, and manage their lands, territories, and resources shall be recognized and respected.
4. **Community Relations and Workers Rights:** Forest management operations shall maintain or enhance the long-term social and economic well being of forest workers and local communities.
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.
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.
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.
8. **Monitoring and Assessment:** Monitoring shall be conducted—appropriate to the scale and intensity of forest management—to assess the condition of forest, yields of forest products, chain of custody, management activities, and their social and environmental impacts.
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 forest shall always be considered in the context of a precautionary approach.
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 the 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.

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