

Knots in the Wood: Explaining the Uneven Emergence of Forest Certification in Developing and Transitioning Countries¹

DRAFT; comments welcome

Benjamin Cashore,² Fred Gale,³ Errol Meidinger,⁴ and Deanna Newsom⁵

Introduction

Rapid expansion of global timber markets in developing and transitioning countries has often caused significant damage to their forests and the people who depend on them. These problems have been exacerbated by limited local regulatory capacity and pressing needs for Western currency. The most important institutional response to date has been forest certification, a process whereby timber from properly managed forests is certified as such by independent auditors and labeled so as to be distinguishable from other timber in global markets. The underlying goal of forest certification is to transform global market forces from engines of environmental destruction to engines of sustainable development by shifting demand to favor timber deriving from sustainably managed forests. While forest certification as a whole has enjoyed a remarkable uptake in the global market, it has lagged in the developing and transitioning countries for which it was primarily designed. The great majority of certified forest area is in developed countries. Drawing on sixteen case studies in developing and transitioning countries, this paper is an attempt to understand the reasons for and implications of this pattern. Overall, it concludes that forest certification has spurred significant improvements in the environmental and social dimensions forest management in many cases, but is far from reaching its full potential. Two key needs are to tailor forest certification to local conditions and to promote more effective global demand for certified products.

¹ Paper presented at the 47th Annual International Studies Association Convention, panel on Global Forest Policy – International, Regional, and National Perspectives on a Contested Issue, San Diego, CA, USA, March 22, 2006.

² Associate Professor, Forestry and Environmental Studies, Yale University
230 Prospect Street, New Haven, CT 6511, USA, benjamin.cashore@yale.edu

³ Lecturer, School of Government, University of Tasmania, Launceston, 7250, Tasmania, Australia, Fred.Gale@utas.edu.au

⁴ Professor and Vice Dean, School of Law, State University of New York, 719 O'Brian Hall, North Campus, Buffalo, NY, 14260-1100, USA eemeid@buffalo.edu; Honorary Professor of Forestry and Environmental Science, University of Freiburg, Germany.

⁵ Associate, Rainforest Alliance, 65 Millet Street, Suite 201, Richmond, VT 05477 USA, dnewsom@ra.org

Background

Forest certification emerged in the late 1980s as a response to the ‘tropical timber crisis’ – a growing realization in developed countries that forests in tropical countries were being rapidly degraded and often destroyed. Although the causes were multiple and variable (e.g., Brown 2001), a key one in many cases was rapidly growing demand for cheap wood from developed countries. Tropical countries were generally unwilling or unable to control the forest destruction, and the intergovernmental system also proved unable to address the problem (e.g., Gale 1988; Humphries 1996). Following the failure to achieve a binding forest convention in the 1992 UNCED meetings in Rio, a small group of international environmental NGOs, social justice organizations, progressive forest managers, wood buyers and others founded the Forest Stewardship Council (FSC) to try to achieve the same end outside the established governmental system (e.g., Elliot 2000). The FSC drew upon the developed discourse of sustainable forest management, the international discussions of sustainable development and human rights, and the lore of private standard setting and certification in other sectors to promulgate a set of principles and criteria of forest management as well as a system for certifying compliance with them (e.g., Meidinger 1999; Cashore, Auld and Newsom 2004).. While this paper cannot go into the details of that system, it centers around a set of global principles and criteria which require compliance with applicable laws and treaties, respect for indigenous rights, protections for workers and communities, protection of biological diversity and ecological functions, special treatment of ‘high conservation value forests,’ and the like. These principles and criteria are further refined by national and regional standard setting processes as well as actual certification proceedings. The dozen-plus organizations that carry out certifications are independent of the FSC and are employed directly by parties seeking certification or their sponsors.

The founding of the FSC spurred the establishment of industry-based competitor programs, first at the national level and eventually at the regional one. Today they are largely aligned under the auspices of the Programme for the Endorsement of Forest Certification (PEFC – originally the Pan-European Forest Certification Council). The PEFC programs have been engaged in a dynamic competition with the FSC, leading to a complex and rapidly changing forest governance system. Thus, while sometimes described as a narrow ‘policy instrument,’ forest certification has turned out to be considerably more. It has stimulated an intensified global dialogue on how to implement sustainable forest management, and fostered institutional dynamism at the international, national and local levels.

Yet, as noted above, the adoption of certification in tropical countries has been halting and uneven. Its uptake in former Soviet-block countries has also been fragile and problematic. We know relatively little about the reasons for and implications of these patterns because most research to date, including our own, has focused on relatively prosperous regions. Several years ago we began

working to redress this problem by finding funding for and commissioning a series of studies of forest certification in developing and transitioning countries.⁶ Ultimately we were able to support sixteen studies, four each in Africa (Gabon, South Africa, Uganda, Zambia) Asia-Pacific (Indonesia, Malaysia, Papua New Guinea, Solomon Islands), Eastern Europe (Estonia, Latvia, Poland, Russia), and Latin America (Bolivia, Brazil, Guatemala, Mexico). Selection criteria included the amount of forested area in the country, level of certification activity, and ability to identify capable authors. The studies were prepared by a variety of academics and practitioners who live and work in the places studied. To facilitate comparability, the studies followed a common template, outlined in Box 1. The template was accompanied by a textual discussion of the issues that should be covered.

Box 1.1: Case Study Template

I. Introduction

II. Background Factors

- 1) Ownership and Tenure
- 2) Markets

III. The Emergence of Forest Certification

- 1) Initial Support
- 2) Institutional Design
- 3) Standards
- 4) Forestry Problems
- 5) Roadblocks and Challenges

IV. The Reaction to Certification

- 1) Forest Policy Community/Stakeholders
- 2) Forest Owners
- 3) Current Status of Forestland Certification

⁶ These included the Ford Foundation, International Tropical Timber Organization, the Southeast Asia Studies Program, the Yale Center for the Study of Globalization, the Korean Foundation, the Rainforest Alliance, the World Wide Fund for Nature, Forest Trends, the World Bank, the German Organization for Technical Cooperation (Gemeinschaft für Technische Zusammenarbeit – GTZ), South Cone, the US Forest Service, the Rockefeller Brothers Fund, and the Kohlberg and Surdna foundations

The completed case studies together with regional overviews and additional general analyses are available in our forthcoming book, *Confronting Sustainability: Forest Certification in Developing and Transitioning Countries*, currently in press. In this paper we summarize and discuss the results of the case studies. First we review general support for forest certification in our cases – both in terms of broad uptake that defies quantitative categorization, as well as quantifiable indicators of forest lands under certification. Then we identify the key factors that appear to facilitate and hinder efforts to build forest certification, and reflect on what this means for the possibility of further institutionalization of forest certification in these countries.

Support for Forest Certification

Our case studies demonstrate considerable variation in support for forest certification across regions, subregions and actors.

Regional and Sub-regional Support

The highest level of support for forest certification among the four regions is in Eastern Europe and Russia. Within the region, Poland stands out as being highly committed to forest certification, but the major factor that motivated it to endorse FSC-style certification so heavily—defending state management against possible privatization—is also evident in Estonia and Latvia. In each case, this strategy was also reinforced by the expressed need to access European markets. Russia evidences a more ambivalent commitment to certification together with an unwillingness to endorse a particular scheme, but also considerably greater interest in certification in the western than the eastern part of the country. This too reflects the importance of retaining access to Western European markets, which, accurately or not, are widely believed to prefer certified products.

In contrast to Eastern Europe, forest certification is much less institutionalized in other regions, perhaps most especially in Africa. In Gabon, Uganda and Zambia, forest certification has a tentative status. It is employed in Uganda as a mechanism to verify a Dutch-sponsored carbon offset project; and in Gabon and Zambia to support a small number of producers targeting overseas markets. South Africa is the big exception in this region, with strong support for certification from large, privately owned plantation companies producing for EU and US markets. We also note an apparent interaction effect between Eastern Europe and Africa over market access issues. During the 1990s and early 2000s the Eastern European countries under review that adopted forest certification dramatically improved their access to European markets; while at the same time African countries, who did not undergo any widespread adoption of forest certification, *lost* market share in Europe, redirecting their exports to the far east, especially China, where there currently exists little discernible interest in certified products for their domestic market. While more research would need to be done to assess these shifts in markets, this pattern does illustrate the importance, in

the global era, of conducting comparative research across different regions of the world.

Certification receives some support in Latin America and Asia. It is more strongly institutionalized in Latin America, with Bolivia standing out as a country that has invested heavily in certification to support sustainable forest management in conjunction with its New Forest Law, introduced in 1996. In Guatemala, too, the government used certification to negotiate with other civil society actors on arrangements to enable logging within the Mayan Biosphere Reserve (MBR) multiple use zone, preventing it from becoming an exclusive conservation zone. In contrast, FSC certification has had difficulty becoming institutionalized in Brazil, where industry resistance has led to the development of an FSC competitor scheme, CERFLOR, although this may indicate that the institutional practice of certification is also taking root in Brazil

In the Asia Pacific a tremendous amount of energy has been devoted to certification, but results on the ground are quite disappointing. In large measure the energy has been devoted—in Indonesia and Malaysia—to developing competitor schemes to FSC to meet the concerns of domestic industry and to satisfy demands for state sovereignty (although there is increasing interaction between the FSC and the domestic LEI program). Actual FSC certification on the ground in both countries is quite marginal. Recently, MTCC certified at the stroke of a pen the states of Peninsular Malaysia, dramatically increasing hectareage certified, although the degree of environmental and social protection provided by this scheme remains in dispute.

Governmental Support

Across our case studies, huge variation exists in the degree of governmental support for forest certification. In several countries governments have driven the process by requesting FSC certification of state forested lands. While this is especially true of Eastern European countries like Poland, Latvia and Estonia, governments in Latin America and Africa have also seen FSC as a solution to specific policy problems. In Uganda, certification was used by the Dutch Electricity Generating Board (SEP) to verify the appropriateness of the forest management practices of a carbon offset project run by its subsidiary, the FACE Foundation. In Mexico, federal resources have been used in cooperation with NGOs to subsidize certification assessment costs, while in Guatemala, FSC solved the problem of balancing environmental conservation of the Maya Biosphere Reserve (MBR) with commercial logging to provide economic opportunities to local communities.

While some governments have wholeheartedly supported FSC certification, others have vigorously objected to this form of external civil society regulation by adopting alternative, competitor schemes such as CERFLOR in Brazil, MTCC in

Malaysia and LEI in Indonesia. Such schemes are viewed by their respective governments as preserving national autonomy and sovereignty and as being more compatible with domestic circumstances. Invariably, however, such schemes have difficulty obtaining international recognition through the timber chain, and have come under pressure from environmental and social actors for their deficiencies. The practical consequences are that those being certified under them also often seek certification under FSC, or defend their programs by claiming that they have the same, or similar, environmental and social benefits as the FSC would provide.

Finally, for a number of governments certification has been a non-issue. Many remain mostly unaware of the approach, or if aware, simply indifferent, neither endorsing nor condemning the FSC. In the Solomon Islands and PNG for example, and despite some familiarity with certification via externally funded projects in the case of PNG, little interest has been shown to date in this new approach to forest management. Instead, government officials have focused much of their attention on traditional regulatory arrangements through the development of forestry codes of practice. The situation is similar in Africa, where governments likewise have not paid a great deal of attention to certification.

Industry Support

Large industry, like government, varies considerably in its support of forest certification. In South Africa, 80 percent of the plantation sector supports the FSC, which it has found to be a solution to market access difficulties. In Brazil, too, managers of plantations have been more responsive to certification than have many of the companies operating in the Amazon. In Russia, some large companies exporting timber to European Union markets have also endorsed FSC certification, having come under pressure, or influence, of Scandinavian companies.

Despite such endorsement, however, large industry in a number of other jurisdictions has vigorously opposed FSC and worked tirelessly through its industry associations (and at times with governments) to develop alternative schemes. The Indonesian timber industry, for example, initiated its own scheme in the early 1990s in response to the FSC threat—but later was obliged by the Indonesian government to participate in a broader process that over time gave rise to LEI. Revealing the dynamic nature of the role of competitor schemes, the Indonesia study reveals that through policy learning and international pressure, the LEI now coordinates its efforts with those of the FSC. In Brazil, the industry worked through the country's national standards setting agency (INMETRO) to develop a scheme—CERFLOR—that would compete with FSC and better correspond to industry preferences.

While large industry support for FSC certification has been variable across and within regions, community based operations have been generally more receptive.

In most of our case studies, it is clear that community groups supported the idea of certification in principle with many seeking to become certified, often assisted by external aid agencies. Community support for certification however has tended to wane after receiving FSC certification—with communities facing a range of problems in maintaining their certificates that result from high costs, low economic benefits, inadequate integration into global production chains and problematic management arrangements.

Civil Society Support

FSC certification has been most heavily endorsed by environmental organizations, which have played a crucial role in its initiation in several countries. In our case studies, WWF emerges as a key ENGO with national offices around the world that were pivotal in introducing the idea of certification within the local forest policy community and in funding practical projects to prove its worth. Likewise, the Rainforest Alliance has played an active role, with its SmartWood program certifying the first ever developing country forest operation, Perum Perhutani, in 1990, and its TREES program assisting certified community forestry operations in Mexico and elsewhere to find international buyers for their products.

However, not all environmental NGOs support certification in all jurisdictions. In Indonesia, the World Rainforest Movement allied with local forestry NGOs such as WALHI called for a moratorium on FSC and LEI certification pending resolution of indigenous peoples' conflicts. In Gabon, environmental NGOs objected to the certification of Leroy Gabon due to the absence of a management plan, poor stakeholder consultation processes, and the presence of a neighboring protected area – efforts which ultimately resulted in Leroy Gabon's decertification. More recently, a large number of NGOs including the Native Forest Network, Robin Wood, World Rainforest Movement and the Swedish Society for Nature Conservation have called for a moratorium on the certification of forest plantations pending the outcome of an FSC review of their environmental, social and economic consequences.⁷

Perhaps most under-represented in our case studies are social actors—especially those that can claim to genuinely represent forest workers. This appears to reflect the relatively poor organization of social interests in the forestry sector. With respect to workers, some governments still do not permit independent unions to form, while in countries that do, forest workers still find it difficult to become organized, most often due to the seasonal and casual nature of the work. Even when forest workers are organized and represented, however, union leaders often view environmental and conservation issues through a rather narrow lens, focusing on the potential negative impacts of supporting forest certification on jobs, wages and entitlements. Ironically, in many jurisdictions our

⁷ "Open Letter asking for moratorium on Certification to FSC", *Forest Stewardship Council Newsletter*, October 3 2005.

case study authors report significant improvements in labor conditions— established wage rates, timely payment of wages, improved safety equipment and practices, better health and benefits packages, better training — but these appear to have occurred without the active involvement of the labor movement.

Factors Facilitating and Hindering Efforts to Institutionalize Certification

What factors account for the observed diversity in regional, sub-regional and actor support for forest certification? Our template identified four key factors: dominant forestry problems, public policy responses, land ownership patterns and market orientation. As a first approximation, interactions among these four factors, set out in Tables 1 to 4 below, explain why forest certification was facilitated or hindered in a specific region or sub-region.

Asia-Pacific

In the Asia-Pacific region the general structural conditions for effective certification have not been present. Countries in the region are responding to a large number of domestic problems in the forest sector, most especially rampant deforestation and forest degradation due to corruption, illegal logging, lack of enforcement capacity and a heavy emphasis on the forests' timber values to the exclusion of their environment and social values. In addition, in Papua New Guinea and Solomon Islands, the industry is in the hands of foreigners who lack a long-term commitment to forest operations. In response, governments in the region have generally sought to introduce reduced impact logging (RIL) via logging codes of conduct (PNG and SI) and through nationally based forest certification schemes (LEI and MTCC). However, RIL only addresses the technical aspects of how logging is done—reducing the degree of collateral damage from forest activity but failing to tackle a myriad of other forestry, environmental and social issues. While FSC certification is well placed to bring stakeholders together to address these additional forestry, environmental, social and indigenous peoples issues, governments in the region, in collaboration with powerful industry groups have constituted a formidable barrier to its introduction.

These forest problems and policy responses interact with two other factors that play an especially important role in the region—tenure arrangements and market orientation. The Asia-Pacific region is bifurcated with respect to official tenure arrangements, with land rights formally vested in the state in Malaysia and Indonesia and in traditional customary tenures in PNG and SI. While many ENGOs presume that customary tenure constitutes a suitable arrangement for the introduction of FSC-style certification, our case studies suggest a much more complex and problematic outcome. Communities operating on customary tenure lands encounter numerous difficulties implementing forest certification in practice, despite their strong desire to do so. These difficulties relate to lack of community managerial capacity in general, as well as specific forest management capacity to produce sizeable volumes of good quality timber in a timely fashion for foreign

markets. In addition, communities have found the direct and indirect costs of certification high in relation to the benefits, resulting in an increasing number of them deciding not to renew their certificates.

Table 1: Factors Affecting the Emergence of Forest Certification in the Asia-Pacific Region

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Indonesia	Widespread corruption; illegal logging; lack of enforcement capacity; over-emphasis on timber values; conflict over indigenous peoples customary rights; shifting cultivation; plantation agriculture; large-scale forest fires;	Devolution of responsibility to sub-national levels; anti-corruption campaigns; improve practices via Indonesian Selective Logging and Planting System;	Land vested in the state and leased to forest concessionaires; customary tenure widespread but not recognized by the state leading to significant levels of conflict;	Focus on value-added production; substantial exports to non-ecosensitive Asian markets (China, Japan, Korea); some eco-sensitive markets in Europe	FSC certification mostly hindered due to non-resolution of indigenous peoples rights question and lack of eco-sensitive markets in Asia; National scheme (LEI) facilitated due to concerns over sovereignty, less emphasis on social and environmental issues, and avoidance of indigenous peoples rights issues.
Malaysia	Over-emphasis on timber values; lack of enforcement of existing legislation (especially Sabah & Sarawak); shifting cultivation; plantation agriculture; conflict over indigenous peoples customary rights;	Marketing campaigns in eco-sensitive product markets; promotion of Malaysian silvicultural system;	Forest land vested in states, which lease to concessionaires; customary tenure widespread but not recognized in most cases leading to conflict, especially in Sabah & Sarawak;	Focus on value-added production, but less so in Sabah and Sarawak; substantial exports to non-ecosensitive markets in Asia (China, Japan, Korea); some eco-sensitive markets in Europe	FSC certification mostly hindered due to non-resolution of indigenous peoples rights questions and lack of eco-sensitive markets in Asia; National scheme (MTCC) facilitated due to concerns over sovereignty and less emphasis on social and environmental issues and avoidance of indigenous peoples rights issues.
Papua New Guinea	Foreign domination of forest industry; widespread corruption; illegal logging; lack of enforcement; shifting cultivation; over-emphasis on timber values;	Establishment of a resource development and allocation process; introduction of a Logging Code of Practice, emphasizing Reduced Impact Logging (RIL); work commenced	97% of land under customary tenure arrangements;	Focus on raw timber production; substantial exports to non-ecosensitive markets in Asia (China, Korea, Japan); foreign domination of timber industry;	FSC certification mostly hindered by lack of interest of foreign dominated industry and government indifference; ENGOs work to introduce FSC certification worthwhile but

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
		on ITTO C&Is;			encounters several challenges related to fragmented, low-volume production, low community forest management and managerial capacity, lack of forward linkages to national and international timber product chains, and high cost of certification; ITTG facilitated community-based certification by providing small markets in New Zealand/Australia; FSC certification mostly hindered by lack of interest of foreign dominated industry and government indifference; ENGOs work to introduce FSC certification worthwhile but encounters several challenges related to fragmented, low-volume production, low community forest management and managerial capacity, lack of forward linkages to national and international timber product chains, and high cost of certification.
Solomon Islands	Foreign domination of forest industry; widespread corruption; illegal logging; lack of enforcement; shifting cultivation; plantation agriculture; over-emphasis on timber values;	Introduce Code of Logging Practice, emphasizing Reduced Impact Logging; incentives to establish forest plantations;	90% of land under customary ownership;	Focus on raw timber production; substantial exports to non-ecosensitive markets in Asia (China, Korea, Japan); foreign domination of timber industry;	encounters several challenges related to fragmented, low-volume production, low community forest management and managerial capacity, lack of forward linkages to national and international timber product chains, and high cost of certification.

In contrast, large-scale operations in the region appear to be better positioned to engage with certification should the demand arise. Here, however, our fourth factor exercises a dominant influence—the overwhelming focus of all countries in the region on production for the non-environmentally sensitive timber markets of Asia, especially China, Japan and Korea. Given this orientation, whether for raw logs from PNG and SI or processed panels from Indonesia and Malaysia, most timber companies in the region do not see the need to adopt a high-level certification system like FSC. The general industry consensus is that FSC imposes high costs without resulting in tangible benefits in the form of increased market access, price premiums or competitive advantages.

Interestingly, our four factors can also be used to understand better those fascinating exceptions to the generally inhospitable climate for FSC certification in the Asia Pacific. Across the region, as noted in the Asia-Pacific Introduction, there have only been a total of 12 FSC forest management certificates issued—five community forest, three plantation, and four natural forest operations—with only five operational in 2004. Of the five operational certificates, none was a community forestry operation signaling the extraordinary difficulties confronting such organizations. While three of the five operational certificates were for natural forest management (the predominant source of most timber across the region), notably two of the five were operating plantations.

Eastern Europe

Table 2 outlines government responses to forest problems and the effects of certification in the Eastern European and Russian context. In comparison to the other regions, the adoption of forest certification in Eastern Europe and Russia seems relatively straightforward. The majority of forests in this region are in relatively good shape. Management capacity, while seriously challenged by the transition process, is also fairly good. For all but central and eastern Russia, the desire to maintain ready exports to Western Europe eased the adoption of certification. In the Balkans and Poland, moreover, FSC certification seems to have been seen as a way of validating the quality and capacity of forest management organizations, although it was also used as an avenue for policy and management. In this way it was able to attract broader social support necessary to the continuation of forest management operations. Finally, the transnational environmental NGOs, often provided key resources to demonstrate the nature and viability of the international management standards embodied in the FSC system.

Table 2. Factors affecting the emergence of forest certification in Eastern Europe and Russia

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Estonia	Poor forestry regulation and planning; over-harvesting; illegal logging	Separation of regulation from management; discussion of best practices; growing involvement of NGOs	40% state; 39% private; 20% still undetermined; private ownership very small and fragmented	Rapidly growing timber industry; European market was significant, but internal development also important.	FSC certification of all state forests. Notable specific changes in forestry practices as a result of FSC standard setting process. Much of the political debate on forestry took place in the context of the FSC standard setting process.
Latvia	Need to satisfy green buyer demands; illegal logging; low transparency; socialist structure	Radical reform of socialist structure 99-2000; division into policy making, oversight, and management functions	50% state; 42% private; 8% other; private ownership small and fragmented	Need to keep green buyers	FSC certification of state enterprises. Certification has become a forum for national policy discussions.
Poland	Access to western European markets; coordination with EU policies. Challenge to traditional state management system	Consolidation of state forestry agency control; vigorous efforts to demonstrate best practices; rejection of privatization.	80% publicly owned, and the great majority of that managed by the State Forests Agency.	Western European markets key to viability of Polish forestry industry. Exports include both finished and raw wood products.	FSC certification quickly adopted, but PEFC effort now also taking root.
Russia	Economic restructuring, ineffective state policy; illegal logging	Continual restructuring; adoption of a leasing system; growing role of NGOs as external critics.	Complete federal ownership; undefined but often respected local rights to NTFPs	Rapidly expanding. European market is fairly controlled, Asian very powerful and turbulent.	FSC certification growing relatively quickly in western Russia. Much more tentative elsewhere in the country. Prospects of other certification systems unclear.

While forest certification has been relatively rapidly accepted in much of the region, however, and is continuing to expand in Russia, it does not yet appear to be deeply embedded in day-to-day forestry practices. Domestic public support for certification also appears to be tepid at best. Therefore it is difficult to be confident of its ultimate level of institutionalization.

Latin America

In Latin America, as Table 3 indicates, structural conditions for successful certification are present in some countries and sectors, but absent in others. In places where governments have seen certification as a means of reaching its

own goals - such as technical assistance among community forestry operations or responding to outside pressure for forest sector reform - certification has generally been facilitated by government incentives and actions. In Guatemala, for example, the government used FSC certification to justify creating forestry concessions in the Maya Biosphere Reserve Multiple Use Zone. In Bolivia, the government felt pressure for reform and created a forestry law that would facilitate certification, while in Mexico the government saw certification as a means of reaching its own goals of capacity building in community forestry operations, and created incentives to make certification accessible to this group.

Table 3: Factors Affecting the Emergence of Forest Certification in Latin America

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Bolivia	Illegal logging; high-grading of valuable species such as mahogany; social conflict over preferential access of industrial timber companies to forest.	Mounting societal outcry about unsustainable forestry and weak enforcement of forestry laws led to reform through the creation of the Forestry Law of 1996; changes to fee system reduced corruption in the concession allocation process and discouraged overharvesting.	All forests are owned by the government, which allocates 40-year concessions mainly to industrial companies but also to some local communities and indigenous peoples; minimal private land.	50% of production exported, mainly as secondary products (e.g. furniture) to US and UK.	FSC certification facilitated by financial support from NGOs and by the Forestry Law of 1996, which prepared companies and landowners for certification by building a solid legal, technical and administrative forestry platform. Certification of industrial companies also facilitated by strong sales to green markets in Europe and North America, though community forestry operations have had difficulty accessing these markets. Certification hindered by competition with products stemming from illegal logging.
Brazil	Illegal logging in the Amazon; conversion of endangered coastal forests to plantations; legal deforestation.	Federal Forest Code requires sustainable forest management but provides little specific guidance; federal enforcement activities are criticized as weak and sometimes	Widespread tenure disputes in the Amazon, although considerable amounts of forests there are in public lands; the federal government proposal to create a state "production forest" covering	Large majority (86%) of timber from Amazon consumed in Brazil, mostly for construction; Brazilian plantations export-focused (primarily Europe and Japan) and	Green export markets, corporate social responsibility and image issues facilitated certification of plantation forests, which currently make up around two-thirds of certified forests in

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
		corrupt. Several state governments in the Amazon region have created pro-active forest policies, including support for community forestry operations and pilot concessions.	10% of the Amazon involves these lands. Tenure arrangements are better defined in the Atlantic Forest region.	dominate global cellulose markets.	Brazil. Certification is hindered in Amazon by domestic markets that are flooded by wood from rampant illegal logging and deforestation. CERFLOR certification scheme was recognized by the PEFC in 2002 and developed with support from industry and participation of government.
Guatemala	Conversion of forests to agriculture; illegal logging, especially of high value species (mainly mahogany); use of forests for firewood.	In 1990, the government created the 2.1 million hectare Maya Biosphere Reserve to conserve biodiversity-rich forests of the Peten region, and revoked all logging permits within the reserve.	An even mix of state, community and private lands; tenure conflicts on 5% of land.	Nearly all (90%) domestic production is consumed domestically; high quality products exported.	In an effort to assure NGOs that new industrial forestry concessions within the Maya Biosphere Reserve Multiple Use Zone were well-managed, the government made FSC certification a requirement of all concession holders within the reserve; financial support of FSC certification by international donors also facilitated the process. Certification activity outside the reserve is minimal; low production volumes and technical capacity of community forests make accessing certified markets difficult.

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
Mexico	Illegal logging and legal deforestation; low technical capacity of community forestry operations.	Government initiatives (through CONAFOR) provide technical assistance and training for communities and <i>ejidos</i> and financial support for silvicultural activities, sometimes in partnership with NGOs; a government department was created to develop new markets for Mexican forest products.	80% forest lands community-owned, 15% private, 5% government.	Low level of value added, with the exception of a few firms in Durango and Chihuahua; 65% of production exported, primarily to the US; recently, sharp increase in forest product imports to Mexico.	FSC certification facilitated by Mexican government, which sees it as a means of reaching community capacity-building goals and provides financial and technical assistance for certification, sometimes in partnership with NGOs; also, U.S. demand for certain certified products facilitated certification in northern Mexico. However, lack of approved FSC standard hinders certification and low production volumes and technical capacity of community forests make accessing certified markets difficult.

However, the predominance of community forestry operations, as seen in Mexico and Guatemala, seems to have facilitated certification in the short term only. While governments and transnational NGOs in the mid- to late-1990s assisted community operations to achieve certification by subsidizing assessment costs and conducting training activities, in the long term, the dominance of community forestry in a region has tended to make certification more challenging. Community operations typically lack business experience and have low efficiency and product quality, making it difficult to access environmentally sensitive markets, which are almost exclusively international. On the other hand, those countries and forestry subsectors with high product quality and the business savvy access to international markets have seen more momentum behind certification. The Brazilian plantation sector, which dominates the global short-fiber cellulose market, as well as producers in northern Mexico that sell to green buyers in the US, and industrial forest companies in Bolivia, have all successfully accessed environmentally-sensitive markets in the U.S. and Europe.

Perhaps the only hindrance of certification that was common to all Latin American case studies was illegal logging. In each of the countries studied, illegally logged forest products were blamed for flooding the markets with cheap alternatives to certified products and driving down prices, making the financial viability of certification even more tenuous. Current efforts to discourage illegal activity in Latin America must be supported and strengthened. Still, in some regions, such as Brazil, legal deforestation may be as destructive as illegal logging.

Africa

The African case studies present a fascinating account of factors that would appear to facilitate certification in the future, but only if other enduring obstacles were addressed. Table 4 summarizes the findings of the Africa cases. One facilitating factor is that with the exception of South Africa, the land is publicly owned. Research on the emergence of forest certification in North America, and Eastern and Western Europe reveals a much greater receptiveness, and ability, to pursue certification than exists when lands are privately owned. However, countervailing this potentially important condition is that government capacity to enforce existing laws and to employ forestry experts is so weak, that until addressed it is unlikely that public ownership can use certification to Africa's competitive advantage. Ironically, FSC style certification in South Africa was successfully championed for highly unusual reasons: its privately owned plantation industry, which only covers just over one percent of this country's land base, wanted to get approval for operations that have been criticized for impinging on the existing unforested ecosystem. However, lessons from South African experience are important for illustrating the importance of market considerations – plantation owners did come under significant scrutiny from European export markets and this fear of existing or future market loss was a prime motivator.

Table 4: Factors affecting the emergence of forest certification in Africa

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
South Africa	South African plantation forest industry practiced in high rainfall, mostly grassland sites, with no natural forests. Concerns about impact of forest operations on	Since 1972, permits must be obtained for any new tree plantings. Since late 1990s forestry has been classified as a Stream Flow Reduction - afforestation permits replaced with water-use licenses. Forestry companies also required to pay	Forestry comprises 1.1 percent of South African's land base of 122.3 million hectares. Private ownership dominated, with 12 timber companies holding vast majority	Forestry among South Africa's top exporting industries. Products for export included pulp, packaging, paper and board and wood chips. Europe important market	FSC acceptance of plantations established pre-1993 and government regulations of plantations in 1990s created climate highly hospitable for industry to seek FSC certification. More than 80% of South Africa's timber plantations

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
	reduction of stream runoff on ecologically sensitive mountain catchments Forest work force affected by extremely high HIV/AIDS infection rates	a water tax These efforts alongside requirement that new afforestation must pass ntensive environmental impact assessment, have reduced expansion of plantation industry			are FSC certified.
Uganda	Historically over harvesting of forests with exceptional biodiversity – estimate at loss of 13-15 percent per decade Illegal logging, Inadequate capacity to enforce existing laws Poaching of bushmeat in protected areas White Rhinos extinct in the wild	1974 Amin government declared land decree, all land to be under state control. In 1990s championing of decentralization and privatization occurred; Established Uganda Wildlife Authority & then National Forest Authority to oversee enhanced system of protected areas and plantations ; Establishment of “timber stamping” tracking to strop illegal trade, control harvesting in plantations and natural forests, and overall data improvement.	Gazetted (protected areas) managed by “parastatals”, government (public) owned land, and Private ownerships consisting of four types of tenures: Customary (limited to a description or class of persons); Freehold (holding of land in perpetuity subject to statutory and common law qualifications) Mailo : under specific requirement of the “Uganda Agreement” Leasehold : (holding of land for a given period).	Government 1994 ban of round wood timber (logs) exports has limited role of external markets Most if not all timber consumed locally. Kenya, Sweden, China, Belgium Germany top list of export markets which FAO ranks as “insignificant”	Government ownership facilitated early support of NGOs in helping National Resistance movement government to achieve conservation objectives. Idea of forest certification has not threatened government, given historical NGO participation in facilitating government objective. Given lack of external markets certification could be used innovatively to seed “certified emissions reductions” (CER) status, as an innovative way to obtain carbon credits, under Kyoto’s Clean Development Mechanism (CDM), for protection of some of its critically important areas of forest biodiversity
Gabon	Degradation of forest land of “exceptional biodiversity” which currently cover 20,000 hectares, or 4/5ths of land base	In 1992 Gabon government took a “top down” approach, reforming institutional and legal frameworks, including development of	All forests part of publicly owned “national forest domain” comprised of two section: permanents forests that cannot be converted to other uses, and and non-	Strong reliance on timber export markets has resulted in forest sector being second largest source of Gabon’s export revenues.	Public land ownership and reliance on export markets is expected to facilitate future certification efforts. However, shift from Europe to China

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
	Limited institutional design, low enforcement capacity, lack of trained staff, limited scientific knowledge of complex forest ecosystems (Low population density means that deforestation is not as significant a problem as in other African countries)	forest planning and harvesting. New forest code adopted in required private concessionaires to managed forests according to specified sustainable forestry goals. Creation of community forestry and local development initiatives financed by logging operations	permanent. Rights to harvest forests come through forest concessions (between 50-200000 hecatres (which cover 11 million hectares); “associated forest permits” for Gabon nationals that cannot exceed 50,000 hectares, but can be managed in conjunction with concession lands; and “mutual agreement” permits that Gabonese citizens and obtain to harvest 50 trees or fewer	The domestic market remains very small - and only small scale business are interested in supplying wood products to the national market. Traditionally, France and other European countries constituted Gabon’s dominant timber market. However since 1995 Gabon’s most important market has shifted to China and other parts of Asia. In 2001 Gabon exported more than 2.5 million cubic meters of raw round logs, with about 45 percent of it going to China (OIBT 2002).	during 1990s may lessen this influence. Exceptional biodiversity has led to concerns about certifying operations in Gabon, with the only FSC certificate awarded eventually withdrawn following international criticism
Zambia	Deforestation and forest degradation; illegal logging; poverty in forest dependent communities; lack of enforcement and resources	Development of new forest policy in 1998 which introduced “Joint Forest Management” as a practice to encourage for communities and other stakeholders participation in management of forest resources	All land is publicly owned. Divided among State land six percent; Reserve (no open access) land 35%; Trust land (open access) 50%; National Parks (no forest extraction allowed, managed for biodiversity) 9%	Before 1964 net importer of forest products (mainly softwood for construction); development of forest plantation led to net exporter (softwood timber and other forest products) after 1964. Major er timber export markets as of 2001 were South Africa (38%), the United States (27.15%); and Zimbabwe 15.48%). Firms and communities are granted the right to harvest through “forest	Limited demand for certification has come from external markets. Aid projects from external NGOs has focused on non-timber products such as honey and wild mushroom certification. One pine plantation certified in anticipation of higher prices they would command in foreign markets.

Country	Dominant forestry problems	Forest policy response	Land ownership patterns	Market orientation	Effect on certification
				certificates”	

The role of export markets in the other cases varied considerably – Uganda’s export market has been deemed “insignificant” by the Food and Agricultural Organization. Zambia has become a net exporter, owing to its 1964 policy to encourage plantations, but its three leading export markets are South Africa, the United States, and Zambia, respectively. Thus, the real and/or perceived higher demand from European markets for certified products was not a significant factor in this country. Arguably as a result, the limited interest in forest certification was sparked through aid projects promoting forest certification as a way of expanding markets for non-timber forest products such as honey and wild mushrooms. As curious, Gabon relies more heavily on export markets than any of our other cases, but saw its share of the European market decline after the mid-1990s as FSC-friendly Eastern European countries increased their access. Instead, Gabon shifted its emphasis to Southeast Asia, with 45 percent of its export market going to China – which currently places almost no emphasis on certified products.

Certainly the forestry policy problems would seem to give support for encouraging certification, since issues of biodiversity (especially Gabon), deforestation (especially Uganda and Zambia) and subsistence use confront basic world wide concerns about global forest degradation. Moreover, most governments responded in the 1970s with a relatively centralized approach, and then in the 1990s with the more decentralized approach championed by the World Bank and other international aid agencies.

Finally, factors such as regime change, poverty, famine, disease and civil war that challenge this continent on every level have significant impacts in what any kind of policy initiative – public or private - might accomplish in the current context. What our review does show is that if these fundamentals are tended to, it is possible, though not inevitable, that forest certification could still emerge as an important tool for promoting responsible forest management in Africa.

Future Prospects

Our case studies indicate that forest certification has spurred significant social and environmental improvements in forestry practices, although we do not have room to detail them in this paper. However, to expand those improvements some significant difficulties need to be overcome, requiring focused action by FSC, sympathetic industry, national governments, environmental NGOs and certification supporters. Major issues to be addressed include market demand, illegal logging, foresters’ attitudes, community capacity, certification standards, certification costs, and closed forest policy networks.

Market Demand

Market demand has been a driver of certification in many of the case study countries. Future efforts will have to focus on spurring additional demand for certified products, especially in regions whose export markets have not shown an interest in green products, such as Asia. The approach of creating more “pull” for certified products appears to have more potential than approaches that create more “push” by subsidizing certification costs for operations with questionable market access. Also, studies of marketing strategies will be very beneficial to those certified operations that are struggling to sell their product.

Illegal Logging

Illegal logging is a problem that not only destroys forest ecosystems in its own right, but also threatens the viability of forest certification by depressing the price of timber and creating extremely low-priced competitor products. New EU efforts under the Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan appear to have significant potential for curbing this problem. Such efforts should be supported and also expanded to encompass more countries, especially major consumers such as Japan, China, Korea and the U.S.

Foresters' Attitudes

Forest certification is often resisted by foresters, in part because they perceive it as an incursion on their traditional authority. Yet, many of our cases demonstrate that forest certification has served ultimately to bolster the authority of foresters, provided they are prepared to practice to emerging global standards. Given the critical importance of foresters to the adoption and implementation of certification, more effort could well be devoted to explaining the process and its benefits to them. ‘Model forests’, such as those that have been developed in Russia and elsewhere, are an effective method of doing so. These have served to reorient the thinking of many foresters and to persuade them of the feasibility and benefits of more ecologically and socially responsible forestry.

Community Capacity

Many of the case studies -- in particular Mexico, Guatemala, Solomon Islands and Papua New Guinea -- emphasize the difficulties faced by certified community forestry operations, which often lack the resources and capacity to fully engage with this new mode of regulation. There is a large group of community operations whose FSC certificates have expired (or are soon to expire), but who choose not to recertify given the lack of economic benefits that have materialized. While some case studies document new efforts by NGOs to address this problem and connect community groups with international markets, greater effort is required to avoid losing this important constituency and set of possible beneficiaries.

Certification Standards

FSC has a “one size fits all” set of generic principles and criteria which can be modified to fit local circumstances. It has also introduced a variety of

mechanisms to address the requirements of small and community operators. A number of phased or “step-wise” approaches to certification have also emerged, which generally outline a series of phases or steps that a candidate operation must achieve, usually beginning with legality and culminating in FSC certification. This approach provides recognition and market incentives to operations that have committed to sustainable forestry but require extra time and effort to come into full compliance with the standards. Originally developed by ProForest under the auspices of the WWF-IKEA Partnership on Forest Products, the phased approach is also offered by groups such as the Rainforest Alliance, whose SmartStep program currently has clients in Bolivia, Brazil, China and Ghana. The ecoforestry standard supported by the International Tropical Timber Group (ITTG) is likewise enabling community operators in PNG and Solomon Islands to export certified timber to New Zealand. To ensure that these initiatives constitute genuine steps towards full FSC certification rather than competing programs in their own right, it will be important to more clearly integrate these initiatives into the FSC approach, establishing criteria and timelines for moving from a lower to a higher step.

Certification Costs and Benefits

In a number of cases the costs of certification appear to outweigh the benefits, especially for smaller operations. This is due to a variety of factors including those listed above (lack of demand, illegal logging, etc). Another key to extending the reach of certification is to reduce its costs or increase its benefits so that more companies, communities and individuals will have an incentive to embrace it? One approach being tested by the FSC and its accredited certifiers is a lower-cost, more streamlined assessment procedure for low risk operations under its SLIMF program. Other groups—such as the Global Forest & Trade Network (GFTN)—are focused on developing markets for certified products. This is being done by increasing consumer demand, but also by assisting certified operations to access those markets through, for example, group marketing strategies for small landowners. The Asian market—especially China, Japan and Korea—is key here and the efforts already commenced to convince Chinese, Japanese and Korean consumers to consider the ecological shadow of their actions must be redoubled.

Another initiative, again already commenced, would work with governments to reduce the flow of illegal timber around the world that unfairly competes with legally produced timber by ensuring that existing forest laws are obeyed. This is the objective, as noted above, of the FLEGT, but this initiative is currently limited to Europe and needs to be expanded. Forest certification could make a major contribution here if governments were to review different schemes and rank them as to their ability to differentiate legal from illegal timber and make this information publicly available. While such a step is, ultimately, quite modest because mere legality does not ensure that the timber is, in fact, sustainably produced, it constitutes a significant step forward within the global timber market from where we currently are.

Our case studies suggest that larger producers can offset some of the costs of certification from improved efficiencies in production that emerge from a systematic analysis and restructuring of their corporate operations. These efficiencies are not, however, being achieved by smaller and community-based operations where numerous hurdles confront managers related to lack of capital, management ability, and market access. More systematic study of the barriers confronting small operators is required, and the results might then be linked to loan and technical support schemes to secure the production of reasonable volumes of high-quality timber for global markets.

Forest Policy Networks

In many parts of the world, forest policy networks remain either closed or semi-open, with environmental ideas vilified and ridiculed in an attempt to preserve the status quo. Yet forest certification has demonstrated a capacity to break open these closed policy networks and create innovative and constructive dialogues between larger groups with a stake in the forest. Better understanding of the nature of forest policy networks and how certification operates to restructure them is required. Factors that might be explored include the discourse of forest science (which fails to adequately appreciate the degree to which forestry is an inherently social and environmental practice), the relationship between a forest policy network and the practice of democracy and good governance within which it is embedded, and the concept of tolerance (where governments and civil society organizations accept the rights of others to dissent).

Conclusion

The sixteen cases reviewed in this research reveal complex interrelationships among a range of macro political and economic factors and micro institutional and practical ones. Perhaps the broadest lesson to be drawn is that certification represents such a highly dynamic field that it would be a mistake to make decisions solely based on existing support and effects. Instead, environmental groups, forest companies, forest owners, workers and governments, must make decisions about the future and potential of forest certification based on the multiple variables that we have identified in this study and how they are likely to move or be moved in the future. Forest certification is best understood as part of a larger ensemble of forest management institutions, which, if aligned correctly, can significantly help to improve sustainable forest management and conserve biodiversity. Our cases reveal considerable challenges, but also untapped possibilities that anyone who cares about the world's biosphere and the role of forests within it can rightly feel motivated and able to unlock.

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