8 Global Initiatives, Public Policies and Private Forestry in Bolivia: Lessons to Date and Remaining Challenges

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Setting the Stage

Changing the forestry paradigm in Bolivia: a brief synopsis

First impressions of Bolivia might be llamas grazing on a rocky hillside high in the Andes. However, the eastern half of Bolivia includes vast expanses, nearly 50 million ha, of tropical forests, representing some of the larger remaining tracts of South American forests outside of the Brazilian Amazon. Up until the mid-1990s, Bolivia's forestry sector was not unlike that of neighbouring countries (ITTO, 1996). They shared both the wealth of the tropical forest in the Amazon basin, as well as the need for major reforms in how it was to be managed. Highly selective but uncontrolled logging of the most valuable species, especially mahogany (*Swietenia macrophylla* King), an antiquated and poorly enforced legal framework, increasing land conversion rates for agricultural expansion (Pacheco, 1998), spontaneous colonization; and widespread corruption summarize the quagmire in which Bolivia's forestry sector found itself. The situation deteriorated until interest groups reached general consensus on the need for change and the government embarked on a major effort to reform the sector.

In 1996, after several years of heated debate by a complex mélange of interested parties, a new forestry law was approved (Pavez and Bojanic, 1998). The law enacted fundamental changes such as tying forest use to land ownership (prior to this, the land could be owned by one party and a second given contracts to harvest timber). It also established the basis for sustainable forest management based on similar principles and criteria as those of the Forest Stewardship Council (FSC) and other certification and forest management schemes (Nittler and Nash, 1999). Major changes included: switching from harvesting contracts to long-term forest concessions (40 years renewable); payment of area-based rather than volume-based stumpage tax; incorporation of systems to guarantee transparency in authorization of forestry rights and participation in changes to the new legal framework; and a complete restructuring of the public sector institutions charged with implementation of the new model.

At the same time, there were a number of parallel policy changes ongoing in Bolivia that furthered both the need for and basis on which to

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structure a new forestry model. The government passed a law to decentralize government in 1994, assigning increased responsibilities to departmental and municipal governments. Through the Popular Participation Law, this vesting of powers in municipal governments was strengthened by allocating 20% of the government's budget directly to municipal governments for their programming and execution. Land reform was also underway. The Ley INRA (Law establishing the National Agrarian Reform Institute) was passed in late 1996 and consolidated a number of previous decisions to recognize indigenous territories. It also recognized forest management on private properties as a legitimate use of the land, consolidating the possibility to manage forest on private lands rather than the traditional strategy of converting the land as proof of ownership. Another major reform was the creation of a system of 'Superintendencies' for the regulation of key services such as banking and telecommunications as well as key resources, such as hydrocarbons, electricity, water, forestry and agriculture. The system, while forming part of the executive branch of government, was to have independent budget authority and to be free from political pressures, thereby providing an important alternative to the widely recognized corruption and ineffectiveness of central government.

While the long-term verdict on the overall effectiveness and sustainability of the forestry sector reform remains to be seen, there have been numerous immediate results that merit mention. One of the major impacts has been the devolution of approximately 15 million ha of forest lands. These were previously held by a poorly capitalized and inefficient industry (STCP Engenheria de Projetos Ltda, 2000), which selectively logged vast extensions of forest, extracting an average volume of less than 0.25 m^3 ha^{-1}. The industry depended on operating advances from mahogany buyers from the USA in order to harvest mahogany. Little investment was made in secondary processing and none in forest management. Within this context, the industry was faced with the choice of returning lands or paying the new area-based tax over their entire holdings. Their decision to return nearly 75% of the concessions improved the balance between investments, installed production capacity and the forest. It also made forest available to other stakeholders, which was one of the main reasons behind the government's decision to impose an area-based tax. Of the returned area, approximately 8 million ha have been recognized as indigenous lands, and an additional 3 million ha have been distributed to local social groups organized and supported by the municipal governments.

Globalization and the new forestry paradigm

Thomas Friedman, in his book, *The Lexus and the Olive Tree*, provides a powerful set of glasses with multiple lenses for understanding the forces behind and the myriad impacts of globalization. This view, and the insights it provides into the economic, political and socio-cultural transformations that are currently sweeping the globe, reveal patterns and currents that are very useful for understanding key elements of the stage upon which Bolivia's new forestry paradigm is set.

Friedman (2000) notes that in order to be able to plug into the new global order, countries must have the appropriate 'hardware', 'operating system' and 'software'. Operating systems, defined most readily as broad macroeconomic policies, range from communist state control ('DOScapital 0.0') to fully liberalized and open economies ('DOScapital 6.0'). In addition to the hardware enclosing an economy and its basic operating system, software packages are needed to optimize system performance. As Friedman notes,

> Software is a measure of the quality of a country's legal and regulatory system, and the degree to which its officials, bureaucrats, and citizens understand its laws, embrace them and know how to make them work. Good software includes banking laws, commercial laws, bankruptcy rules, contracts laws, business codes of conduct, a genuinely independent central bank, property rights that encourage risk-taking, processes for judicial review, international accounting standards, commercial courts, regulatory oversight agencies backed up by an impartial judiciary, laws against conflicts of interest and insider trading by government officials, and officials and citizens ready to implement these rules in a reasonably consistent manner. (Friedman, 2000: 151–152).

Bolivia was a pioneer in introducing the first generation of macroeconomic policy reforms in its successful bid to overcome hyperinflation in the mid-1980s. It continued as a pioneer in the 1990s with a second generation of reforms, including additional work on economic liberalization, the

large-scale privatization of state enterprises, decentralization of political power, and agrarian land reform (Friedman, 2000). The new Forestry Law was part of this process and was linked inextricably to each of the other pieces of the overall reform package. On the institutional side, the Superintendencies were to be apolitical. They were to have the highest technical standards, be efficient, be transparent and be corruption-free. They were to be fully DOScapital 6.0-compatible.

There were other elements of the new forestry paradigm that were DOScapital 6.0-compatible as well (e.g. reforms in the forest concession system, the use of international standards to promote both more rational and more sustainable production systems, and openings for civil society institutions to serve as watchdogs). While much of this new forestry software was DOScapital 6.0-compatible, what remained to be seen was whether:

- the other software of the Bolivian system was being upgraded fast enough to allow the forestry software to function effectively;
- the second generation reforms would be proactively implemented by the new government that came to power in August 1997;
- a third generation of reforms necessary to provide Bolivia with additional software to run DOScapital 6.0 (including far-reaching reforms of the judicial system, the customs service, and management and maintenance of the country's transportation infrastructure) could be successfully launched.

Public Policies, Institutions and Private Forestry

Macro policies

In Bolivia, policy formulation, discussion and diffusion tend to take place every 5 years during presidential campaigns. Between elections, administrations do not usually engage in public policy debates. Instead, much of the policy formulation takes place piecemeal, either in the inner offices of key officials and their personal advisors, or in private discussions with politically powerful interest groups or powerful and well-connected individuals. Most of the time, the resulting 'policies' are more the reflection of the idiosyncrasies of the individuals making the decisions rather than the result of any transparent process involving technical analysis, public discussion or broad consensus. When administrations change, it is generally unclear which existing policies will continue to be implemented. One can only wait until action is taken, or not taken, to start to discern which policies are being followed.

The forestry law and related legislation described in the previous section were, at first, aggressively implemented and had significant impacts. Following the change of administration in 1997, implementation of several of these laws was either slowed down or stopped. Over the past year, as confrontation has escalated in scope and violence, the government has had to focus its efforts, energies and talents on trying to quell unrest in every region and in virtually every sector across the country. One potential casualty of this state of affairs is the forestry law, which remains dangerously incomplete in its implementation. While still running on the successes of its first several years, inaction on the part of the government to finalize a number of key implementation steps threatens to reverse some of the critical gains made by the sector and block others from taking place.

Sector-specific policy

The new forestry law was passed in 1996 amid widespread discontent with the performance of both the timber industry and the *Centro de Desarrollo Forestal* (CDF), the sole government institution charged with regulating the sector. There was recognition that Bolivia's forestry resources were neither being efficiently used nor equitably distributed.

The new law introduced a comprehensive forestry regime. Its purpose was 'to regulate the sustainable use and the protection of forest resources and forest lands in order to benefit current and future generations . . .' (for details on the law see MDSMA (1996) and Pavez and Bojanic (1998)).

To put the new forestry regime in place, the law assigned roles and functions to the public and private sectors and to civil society as follows.

- For the public sector, the law proposed a novel institutional framework centred

around three separate national institutions performing normative, regulatory, and investment functions. These functions were to be facilitated and, in some cases, delegated to the local level by municipal and departmental governments and regional regulatory offices.

- For the forest users (private sector), the law set technical norms and standards that must be met to obtain and retain forest use rights. It was up to the private sector to find the best way to meet these standards and remain in business.
- The law assigned the role of overseeing the sector to civil society, providing it with mechanisms to aid in the implementation and enforcement of the new forestry regime.

The forestry law contained provisions that make it compatible with the democratization and decentralization of the country. Departmental and municipal governments play an important role in the implementation of the regime. Consistent with this approach, for the first time in the history of the country the law recognized the legitimate rights of indigenous groups to access and use forests. They were granted the exclusive use of the forests within their territories.

Forestry sector institutions

Public sector institutions

The forestry law established the institutional framework for the public sector by assigning roles and functions to a number of central, departmental and municipal institutions.

The law placed the direction of the sector, including the development of norms and standards, under the Ministry of Sustainable Development and Planning (MDSP), regulation under a newly created Forest Superintendency (FS), and investment under a new National Fund for Forestry Development (FONABOSQUE). In addition, as stipulated in the Popular Participation and Administrative Decentralization laws, a series of implementation functions were assigned to departmental governments (*Prefecturas*) and municipalities (*Municipios*) (for additional details, see MDSMA, 1996).

Private sector institutions

Since the law was enacted, there has been a resurgence of private sector activity. Some of this activity has become organized; most of it has not. The private sector is made up of forest users and service providers. There are four types of forest users: industrial concessionaires, private landowners, groups of small producers (generally refered to as *Agrupaciones Sociales de Lugar* (ASLs)) and indigenous groups (collectively referred to as TCOs (*Tierras Comunitarias de Origen*)). Of these four forest-user categories, only the industrial concessionaires have an organization that represents their collective interests and also provides technical services to its members. This is the National Forestry Chamber (*Camara Forestal de Bolivia*). This predates the new law and is an effective lobbying organization. In addition it also provides its members with technical services through a technical branch known as PROMABOSQUE. Landowners work independently, as do the TCOs and ASLs, although the latter two may include forest-user units that are composed from a couple of dozen to several hundred members. It can be expected that both ASLs and TCOs will be forming their own associations to represent their collective interest in the near future, especially in view of the fact that the *Camara Forestal*, which claims to speak for all forest users, has been unable or unwilling to recruit them as members.

Civil society institutions

One of the most interesting aspects of the law, and one that has not yet been developed, is the role that citizens, as individuals or in associations, can play to ensure that forests are managed sustainably and for the common good. Unfortunately, the one NGO (non-governmental organization) that was formed to promote the role of civil society in the implementation of the law (the *Sociedad Boliviana de Derecho Ambiental*) has been unable to become the catalyst for widespread civil society interest and participation. Citizen participation and monitoring are ultimately the best guarantees that both the government and the users will live up to their responsibilities and manage the forests sustainably.

Macro institutional issues

Five years after the passage of the new law mandating a complete overhaul of the public sector forestry institutional framework, only two institutions have been deployed and are functioning satisfactorily. These are the Forest Superintendency and the Municipal Forestry Units. All the other proposed institutions are either non-functional or have not yet been established.

The National Forestry Directorate, created by the MDSP to direct the sector's development, has been particularly ineffective. The Directorate has not only not completed the one-time actions needed to implement the provisions of the law, but it has also not yet begun to develop the capacity it needs to carry out its normative and policy functions. Why has so little progress been made? Primarily because the MDSP suffers from the classic problems of public sector institutions in Bolivia: systemic politicization, lack of continuity due to the absence of a civil service, lack of transparency, lack of accountability, and corruption. Departmental governments, which receive a substantial share of the forest user fees, have also accomplished very little to date. They are so politicized that they do little more than use their resources to employ (reward) members of the political parties in the governing coalition. The National Fund for Forestry Development has been set up as an account to receive the user fees assigned to it, as well as all fines and monies generated from confiscation and auctioning of illegal products. However, the Fund has yet to function as an institution.

Created shortly after the Law was enacted, the Forestry Superintendency, located not in La Paz but in the lowlands in Santa Cruz, moved quickly to establish itself as a highly capable and respected institution. It has played the central role to date in operationalizing the new forestry regime. In addition to being apolitical, the Forest Superintendency has been very proactive in promoting transparency in its decision making (Superintendencia Forestal, n.d.). This is most unusual for Bolivian public sector institutions and serves as an excellent model for others to follow. The success of the Forest Superintendency clearly demonstrates that creating effective and capable public institutions is not constrained by lack of financial, human or technical resources. The key constraint is lack of political will.

One of the most important questions about public policy is also one of the most difficult to answer: does the political will exist to take on both the vested interests and institutional inertia that stand in the way of implementing policy change? Thompson and Warburton (1985) identified a critical dimension of this question as follows:

> Development experts have now learned at their cost that the impressive array of policy levers displayed in the ministries of many of the less-developed countries are, all too often, not connected to anything. This is usually interpreted as a symptom of underdevelopment; the conclusion is that they should be connected and that satisfactory development will become possible once they are connected . . . In a system based upon the management of powerlessness the fact that the policy levers are not connected to anything may demonstrate neither underdevelopment, nor inefficiency, nor oversight; rather, it may confirm that everything is functioning correctly (Thompson and Warburton, 1985: 212).

When dealing with the MDSP this warning rings true. When dealing with the Forest Superintendency, forest concessionaires, local social groups and indigenous groups engaged in forest management, it does not. Implementation of the new forestry paradigm is moving at different speeds with different stakeholders.

Forest Certification: a Key 'Driver' of the New Forestry Paradigm

Elements of certification

Certification has three principal elements that have guided its development: environmental responsibility, social benefits and economic viability. The three serve as the basis for the organizational structure of the Forest Stewardship Council's (FSC) membership chambers, the development of certification standards and the evaluation process. They strive to guarantee sustainability of the forest management operations, the surrounding and affected communities, and ultimately the forest.

The Bolivian forestry paradigm developed in parallel with FSC certification from their common beginnings in 1993. This was a time of

strong tropical forest protection and anti-logging sentiment (Dickinson *et al.*, 1996). FSC certification, with its strong environmental and social assessment provisions, offered consumers, government and industry itself a system to evaluate and foster good forest management practices.

The debate over certification

The Bolivian debate

In Bolivia, the concept of certification was first introduced by WWF-Bolivia in 1992 and instantly rejected by the industry as a whole. The Bolivia Sustainable Forest Management Project (BOLFOR), funded by USAID and the Government of Bolivia, renewed this debate in 1994. In a general assembly, organized in October 1994, a large number of stakeholders (industry, conservation community, social groups, professional foresters and NGOs) were brought together to discuss the concept. A decision was made to establish a steering committee, convened by BOLFOR, including representatives from diverse stakeholder groups (Jack, 1998).

The debate over certification had just begun. Industry accepted certification as if it were an inevitable bitter pill that would have to be swallowed or, in the best-case scenario, a type of insurance policy that would allow them to continue to operate and sell internationally (Nittler and Nash, 1999). Indigenous leaders scoffed at the possibility of certifying forests given the extreme level of conflict between traditional demands and existing harvesting contracts. Government struggled with the definition of their role, or lack thereof, in the voluntary certification process. Numerous meetings of the steering committee were held, as well as side meetings with the various special interest groups, which were necessary to bring a shared understanding of the certification process to the various stakeholders (BOLFOR, 1996).

The steering committee evolved into a local NGO that legally established itself as the Bolivian Council for Voluntary Forestry Certification (CFV). The CFV provides training and promotes and oversees the overall certification movement in Bolivia with support from foundations and bilateral sources. One of its key roles was the development of regional standards for timber products. Through a very participatory process, experts were brought together and, over a 3-year period, standards were prepared to translate FSC principles and criteria into measurable indicators to enable certifiers to evaluate forest management operations in the tropics of Bolivia. In 1998, these standards were approved by the FSC.

At the same time, BOLFOR was promoting the identification and strengthening of local institutions to partner with interested certifiers. A partnership was developed between CIMAR, a local NGO affiliated with a national university, and SmartWood, affiliated with the Rainforest Alliance. The partnering organizations have been key in both promoting and carrying out the vast majority of the certification exercises thus far in Bolivia (CIMAR, 2000). Recently, SmartWood has established an office based in Santa Cruz to provide services throughout the region and SGS has established a strong presence.

One of the catalytic events that turned the tide in the direction of certification was a round of business meetings held in Santa Cruz in late 1997. With MacArthur Foundation support, the Forest Management Trust sponsored an Encounter between ten buyers of certified products from Europe and North America and over 20 certified or proto-certified Bolivian companies. The event was organized to provide information to both producers and buyers, allow for individual meetings between these groups and facilitate site visits to production facilities. The results were stimulating. The buyers discovered a country they scarcely knew existed, with the largest area of certified tropical forest in the world; while the producers, still uncertain about the market for certified products, found themselves in negotiation with serious buyers seeking container-loads of certified curtain rods, mouldings, veneer and lumber.

Key to the success of the meetings was CADEX, the Chamber of Exporters, whose staff was instrumental in gaining the confidence of industry, setting up business meetings and following through on relationships established. Although the National Forestry Chamber (*Cámara Forestal de Bolivia* – CFB) chose not to formally participate in the event due to opposition to certification by some of its members at that juncture, 20 affiliates did take an active part. The participation of prominent members of this organization was a key factor in their later endorsement of certification.

Three years later, one of the companies present at the meeting has established a solid business relationship with the UK market, selling US$6 million worth of outdoor furniture in 2000, doubling their 1999 sales. Awareness of the certified market was greatly increased among the majority of Bolivian companies, contributing to their willingness to seek certification. However, awareness does not equal sales. With the exception of the one clear success, Bolivian companies failed to follow up on initial orders and leads. Rather than becoming the catalyst for accelerated growth in certified forest product sales, the Encounter served as a wake-up call, alerting all concerned that profound changes in business structure and management would be needed before Bolivia could take advantage of its position as the largest potential source of certified tropical hardwoods in the world.

There have been two other key factors that have contributed to rapid expansion of the certification movement in Bolivia. First, the government's strong commitment to sustainable forest management and corresponding regulatory change has placed certified forest management within the grasp of all companies that fully comply with the country's laws.

The second key factor that has influenced acceptance of certification in Bolivia has been the participation of influential industry leaders. Several of the largest companies in the country have led the certification movement, spurred by the potential of entering new markets with lesser known species and diversified product mixes. An example of this is the company CIMAL, which is one of the two or three largest companies in the country and the first to certify two of its four concessions in 1997. Recently, the other two concessions have also been certified, bringing their total land under certified management to nearly 340,000 ha. Cristobal Roda, principal owner of CIMAL and its affiliated company *Industrias del Mueble Roda* (IMR), has been key to promoting certification in Bolivia. In addition to serving as an example, he has personally played a major role in convincing the *Camara Forestal* to take a pro-certification stance.

Equally important has been the participation of the company La Chonta, under the management of Pablo Antelo. Antelo led La Chonta to certify its two concessions on 220,000 ha of semi-humid tropical forest. In one of these, Antelo's ability to creatively resolve conflicts posed by traditional demands on the land by the Guarayo indigenous group was important. He also was instrumental in the creation of the CFV and served as its first president.

The fact that the National Forestry Chamber has embraced certification and even created a fund to support it represents a major shift in the industry's perspective towards sustainable forest management. Prior to 1996, the industry was branded as one of the most corrupt, environmentally damaging and socially insensitive in the country. While there is a still a segment of the population that may argue this, the image of the sector has improved markedly as a result of its gains in certification. The government uses the area certified as an indicator in its sustainable development plan and proudly cites industry's gains in certification as a landmark achievement for the country.

The expatriate debate

The debate among the expatriate or international actors did little to foster acceptance of certification in Bolivia, instead it probably had the opposite effect. The continued pressure by US companies to buy exclusively mahogany, the fact that the only international company operating in Bolivia (Berna of US-based SunChase Holdings) spoke out strongly against certification, and the confusion created by the international debates on different certification schemes (FSC vs. ISO, for example) did little to support the movement. At the same time, articles published by Conservation International staff in *Scientific American* (Rice *et al.*, 1997) and in *Science* (Bowles *et al.*, 1998) attempted to undermine sustainable forest management in general and were used by those opposed to certification or any type of regulated forest management. While the WWF and the World Bank formed an alliance to promote protected areas and certified forest management, the Bank failed to clarify their policy on interventions in tropical forests. Instead, they continued to fund projects that expanded the agricultural frontier, causing tropical forest to shrink. The same lack of clarity existed within the US Government. While USAID funded the BOLFOR project, which clearly mandated development of certification mechanisms within Bolivia, the State Department argued against certification in international fora such as the ITTO.

Proof of the pudding: results to date

Certification

The first certification in Bolivia took place in 1996. It was for Lomerio, a forest managed by an indigenous community. Roda followed with the certification of two concessions in 1997, and the area under certification has continued to increase since then. After robust growth in 1999, forest certification grew at a much slower rate in 2000. Compared with an 86% increase in 1999, in 2000 the total area certified grew by only 3% to a new total of 893,928 ha (SIFOR/BOL, 1998–2001). However, at the end of 2000, SmartWood decided to certify two additional concessions, Lago Verde and Vasber. The process for this certification was expected to be concluded in early 2001, adding an additional 181,750 ha for a new total of 1,075,678 ha. This keeps Bolivia in its position as the worldwide leader of certified natural forest in the tropics. There are 17 companies, two of which are TCOs, with 1,517,127 ha involved in the certification process at present (SIFOR/BOL, 2001).

Area under forest management

Of equal interest is the number of companies managing their forest under the legally approved standards set forth in the Forestry Law but that are not yet moving towards certification. BOLFOR carries out an annual review of its clients using 12 key indicators to determine their compliance with good forest management practices. This review indicates that an additional 1,074,148 ha are being managed sustainably. Over half of this area is made up of ten municipal producers associations (ASLs) (326,811 ha) and four indigenous community groups (TCOs) (215,205 ha). At the national level, the number of companies and community groups that have presented management plans in accordance with the standards established by the forestry law and regulations surpasses 7 million ha.

Certified product development and marketing

While the rate of certification slowed in 2000, as did the overall total of forest product exports, the value of certified exports continued to increase. In 1999, a total of US$7.8 million of certified products were exported. In 2000, this reached an estimated US$12.6 million, representing an increase of 61% (SIFOR/BOL, 2000, 2001). It is worth noting that certified products comprise nearly 20% of total wood product exports, and this is likely to increase rapidly in future years as secondary producers, such as Jolyka, Boholtz and UTD Doors, all of which are chain-of-custody certified, lock in certified raw material sources. Companies with the capacity to add value to their raw material have boosted export values, as well as being able to enter into new markets for an expanding number of products and species.

CADEFOR (Centro Amazonico de Desarrollo Forestal/Amazonian Centre for Sustainable Forest Enterprise)

The aftermath of the MacArthur Foundation-funded Encounter in Santa Cruz in late 1997 revealed the challenge to Bolivia's competitiveness in what has subsequently become a major world market for certified wood products. BOLFOR, with USAID concurrence, chose to join with the Forest Management Trust in addressing alternative approaches to meeting the challenge and created CADEFOR (*Centro Amazonico de Desarrollo Forestal*/Amazonian Centre for Sustainable Forest Enterprise). CADEFOR became fully operational as a Bolivian non-profit organization in March 2000 with the goal of helping Bolivian certified forest enterprises become successful participants in the export market for products from sustainably managed forests. Clients include private sector concessions and community enterprises with titles to productive forests, as well as private enterprises engaged in value-added processing of products for the export and domestic markets.

Certification: the road ahead

The very success of Bolivia in certifying forest management has become the greatest challenge to sustaining this process. Certification is market driven. Certified operations in Bolivia conserve biodiversity, not out of altruism, but in order to gain perceived market advantage. Most operations are not, however, gaining that market

advantage. Current harvesting results in only a small percentage of the potential volume of certified wood actually reaching the market. There is grave danger that the market incentive to practice sustainable management will be lost. As community producers become certified, the challenge becomes more acute because they lack market links and skills. Bolivia must bring its costs down and secure markets, otherwise the advantage afforded by having a large area of certified forest will evaporate within a few years as Brazil and other tropical countries certify their forests.

Consolidation of the certification movement in Bolivia faces numerous challenges and opportunities. Industry and large forest land managers must lock in markets, compete with traditional and non-certified producers, and continue their diversification of species and products. Certification has opened the door to a number of new buyers. Industry must present a new face as responsible and reliable producers in order to fully take advantage of this opportunity. The relationship between the area under management and the companies' installed capacity remains skewed towards not taking full advantage of the value of the forest resource (or undercutting and incurring high unit costs due to low production volumes). New investment in milling and processing equipment is a must if industry is to compete. Challenges remain in improving silvicultural and forest management practices. While current practices are based on the best conventional wisdom, Bolivia must continue to develop the information base and capabilities on which to project more reliable growth, yield and biological responses to interventions in the forest. For smaller producers and community groups, the challenge is more related to acquiring the capital and technological basis to develop the management of their forest resource. There are a growing number of Bolivian secondary processors seeking chain-of-custody certification that potentially provides a solution. They are interested in locking in certified raw material sources. It is hoped that they will invest with community producers in order to advance certified forest management in municipal forests and on indigenous lands.

The fact that the indigenous population is now steward of nearly half of Bolivia's production forests has created a tremendous challenge for government and the international community. These lands, if not protected and utilized, will be subject to spontaneous colonization and illegal logging. In most cases, organizational and management capacity is extremely limited, protection is weak and forest management is unlikely without substantial support from outside. Organizational and technical assistance is being provided by social and technical projects managed by local NGOs and bilateral initiatives such as BOLFOR. The only solution to leveraging sufficient capital, however, is to engage the private sector in the purchasing, harvesting and processing of the timber resource in a way that is conducive to sustainable socio-economic development of the local population. The challenge here is to provide substantial guarantees to the industry to protect their investment, while assuring full participation and transparency at the community level. Initial examples of this model are unfolding in Bolivia and certification has a key role to play in this process.

Shifting the Forestry Paradigm: the Unfinished Agenda

Bolivia has set in motion a path-breaking paradigm shift in the management of its forestry resources. Results to date with forest certification have been impressive. While there have been important lessons learned and clear forward movement in implementation of the new paradigm, there are also significant challenges ahead and some storm clouds on the horizon.

The Top Ten remaining challenges are:

1. Sector policy framework

Getting the sector policy framework right is the key first step. Bolivia did an excellent job of this even though the policy is wrapped within a new law and many challenges remain in its implementation. The central role of private forest industry on public and indigenous lands is an important piece of the overall equation.

The key remaining challenge is implementation, linked to each of the issues outlined below. In addition, there is an urgent need to explore harmonization of public policies across the nation and a multi-country region.

2. Seeing the forest for the trees

What is happening outside of the forestry sector (including the macro-political, economic and social influences) is at least as important as what is happening inside the sector, if not more so. Implementation of the new paradigm requires a focus on both the forest and the trees. While the current government has attempted to extend the reform efforts of its predecessor into the much needed areas of judicial, customs and civil service reform, implementation of key elements of the Forestry and Agrarian Reform laws have faltered due to political influences. The recent economic crises of Bolivia's neighbours (Brazil and Argentina) have had major impacts throughout the Bolivian economy, including the forestry sector. This uncertainty, coupled with signs of wavering political will, lack of forward movement on land reform, and continued corruption, has led to unwillingness to make the investments necessary to strengthen Bolivian competitiveness regarding its forest products industries. Control and use of natural resources has increasingly become a 'flashpoint' issue within Bolivian society (e.g. water-use in Cochabamba; Brazil-nut harvesting rights in Pando; slow and bureaucratic implementation of land titling in the lowlands). Bolivia's political and economic elites need to listen carefully to the concerns being expressed and find solutions that address the needs of the poorer and more marginalized segments of society.

The key challenge is to regain forward momentum on implementation of the Forestry Law and the suite of other reforms that need to work synergistically to make implementation a reality.

In addition, Hernando de Soto has identified a critical piece of 'the forest' that deserves urgent attention. In his seminal book, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, he notes:

> By stabilizing and adjusting "by the book", the globalizers' macroeconomic programes have dramatically rationalized the economic management of developing countries. But because their book does not address the fact that most people do not have property rights, they have done only a fraction of the work required to create a comprehensive capitalist system and market economy. (de Soto, 2000: 211).

de Soto demonstrates that the major stumbling block that keeps much of the rest of the world from benefiting from capitalism is its inability to produce capital. The problem is not that the poor do not have assets.

> Even in the poorest countries, the poor save. The value of savings among the poor is, in fact, immense – forty times all the foreign aid received throughout the world since 1945. In Egypt, for instance, the wealth that the poor have accumulated is worth fifty-five times as much as the sum of all direct foreign investment ever recorded there, including the Suez Canal and the Aswan Dam. (de Soto, 2000: 5).

The problem is that the poor hold these resources

> in defective forms: houses built on land whose ownership rights are not adequately recorded, unincorporated businesses with undefined liability, industries located where financiers and investors cannot see them. Because the rights to these possessions are not adequately documented, these assets cannot readily be turned into capital, cannot be traded outside of narrow local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against an investment . . . It is the unavailability of these essential representations that explain why people who have adopted every other Western invention, from the paper clip to the nuclear reactor, have not been able to produce sufficient capital to make domestic capitalism work. (de Soto, 2000: 6–7).

3. The 'soft state': possibilities and limitations

Bolivia is a 'soft state', with relatively weak and in many cases ineffective government institutions. At the same time though, the lack of a strong central government allowed Bolivia to adopt a private-sector-led model for forestry development with the government role limited to establishing the rules of the game and to doing what it could to monitor and enforce them. Unlike other parts of the world, with entrenched civil services including forestry extension services, the procedures and habits learned under an earlier forestry regime did not need to be 'unlearned'. The challenge in Bolivia has been to overcome the problems of the 'soft state' by creating a parallel structure at the national level (the Forest Superintendency) while at the

same time pushing forward on decentralization of authority and responsibility to the municipal level.

The remaining challenges are to get the central government to assume its minimalist, but essential, role and to protect the independence and autonomy of the Forest Superintendency so that implementation of the new paradigm can proceed.

4. Resource tenure: a primordial condition

The close link between resource tenure and a new way of doing forestry was clearly identified early on in Bolivia (Andaluz, 1998). New Forestry and Agrarian Reform laws were passed in tandem and the institutions set up to implement the laws were established at the same time. Failure to aggressively implement the INRA law has served as a major obstacle to effective implementation of the new forestry paradigm. Without secure tenure, private producers are reluctant to invest in forestry and there is little protection of much of the forest, leading to high levels of illegal logging and encroachment.

Finding both the political will and the administrative ability to fully implement land reform and secure resource tenure in the lowlands is key. In addition, de Soto's challenge to pursue a 'property revolution' covering all types of assets needs to be addressed (de Soto, 2000).

5. The sustainability conundrum: biological dimensions

BOLFOR has done an excellent job of building on conventional wisdom and learning-by-doing while at the same time supporting carefully focused applied research. As creating a full-blown research infrastructure in Bolivia is both unrealistic and unsustainable, emphasis is now being given to bringing in international research institutions (e.g. CIFOR, University of Florida) to team up with local institutions, NGOs and forest managers to continue the process of learning as much as possible, as quickly as possible, about the biological (and economic and social) dimensions of sustainable forest management in the Bolivian lowlands. Verifying the basic assumptions behind the new model is critical to ensuring biological sustainability of the system.

6. The sustainability conundrum: economic dimensions

The economics of shifting from the old 'cut and run' mining approach to forestry to the new paradigm has major cost and financial implications. Sustainable forest management as prescribed in Bolivia is profitable, although probably not as profitable as the previous uncontrolled system. Costs are reduced on a volume basis through better planning and operating on reduced areas, but the introduction of lesser-known species brings lower prices than the much sought-after mahogany and other select woods. Major improvements in entrepreneurial capacity, increased investments in technology, and value-added processing are crucial for most companies to face this new scenario. Joint ventures to facilitate acquisition of capital, technology, managerial know-how, and markets appear to be an increasingly important and viable option. Support such as that offered by CADEFOR is central to the development of responses to these needs, especially as they relate to smaller producers, including municipal producer associations and indigenous communities.

7. The sustainability conundrum: social dimensions

The social dimensions of major changes in resource use are complex and constantly evolving. Bolivia chose to focus initially on the large producers/concessionaires and this decision was the correct one. Failure to do so would probably have strained the credibility of the new system to the breaking point.

The major focus of implementation has now shifted to social groups with access to large tracts of forest, including municipal producer associations and indigenous communities (Kralijevic, 1999; Stocks, 1999; Williams and Wilson, 1999). Increasing the scope and applicability of applied social science research is key, so that the results can proactively inform implementation of the Forestry Law in this complex and untried endeavour (Pacheco and Kaimowitz, 1998). Civil society watchdog groups are needed to monitor implementation, especially to monitor how industry interacts with these social groups.

8. The sustainability conundrum: institutional dimensions

Bolivia's chronic problems of politicized government bureaucracy, lack of civil service and lack of transparency in decision making have all contributed to a lack of sufficient progress on the institutional dimensions of the new forestry paradigm. However, the Forest Superintendency demonstrates that effective institutions can be established within the government given effective leadership and the will to do so. It is, however, the exception that proves the rule. Four years into the current government, there have been four National Directors of Forestry, not one of them effective in moving implementation of the new forestry paradigm forward.

Institutional sustainability presents a large and important set of interrelated challenges. Decentralization and working with local groups (municipal governments, federations of municipalities, producers associations, indigenous groups, etc.) offer rays of hope. Additional reforms and systemic changes are needed to address the challenges facing central and department-level government institutions.

9. Global initiatives: drivers and others

One global initiative, forest certification, has been extremely important in the Bolivian case. It has served as an external 'driver' prompting Bolivian producers to adopt the biological, economic and social sustainability elements required for certification in order to plug into the new and rapidly growing market for certified forest products. Many other global initiatives, discussed in the full, original version of the paper on which this chapter is based, have been mostly irrelevant to and unconnected with the Bolivian experience.

10. Globalization: tying it all together?

Globalization is a powerful set of forces and relationships that is influencing forestry development in Bolivia in many different, and sometimes contradictory, ways. The first key is to better understand these forces and relationships. Thomas Friedman's *The Lexus and the Olive Tree* is an excellent introduction, complemented by Hernando de Soto's *The Mystery of Capital.*

In his chapter on 'Shapers, Adapters and Thinking About Power', Friedman notes,

> The groups making the biggest difference today are those that harness the economic self-interest of companies and consumers and make that a force for environmental protection, for upgrading workers' rights, for promoting human rights – rather than a force working against such values . . . Economic self-interest is the big force at work in the world. It isn't the only one. Laws and norms still matter. Government still matters. Government still needs to pass laws and regulate in ways that protect society as a whole and not just the interests of a particular group of consumers or activists. But often the best way to win adherence to laws and norms is by trying to channel economic self-interest – the very metabolism of the globalization system – in a way that makes it restorative rather than destructive. (Friedman, 2000: 209).

This is an excellent description of the drivers behind forest certification within the broader context of the new forestry paradigm in Bolivia.

The key question in Bolivia is whether the momentum behind the wide-ranging series of reforms that derive from the process of globalization will be maintained or not; or to use Friedman's image, whether Bolivia will continue to move both quickly and systematically towards DOScapital 6.0. Bolivia has been ahead of many other countries in its reforms: first in the macroeconomic arena; then in decentralization, privatization, indigenous rights, land reform and the new forestry paradigm; and most recently in starting to seriously tackle corruption and reform of the judiciary. Much progress has been made at the conceptual and policy pronouncement levels. Less progress has been made on the ground. The challenge is to continue moving from 'talking the talk' to 'walking the walk'.

Globalization does not mean that everything must change. The olive tree (representing tradition, sense of place, sense of community, etc.) is also important. It is a question of balance, of progressive change and of overall forward movement. In Friedman's words:

> How we learn to strike the right balance between globalization's inherently empowering and humanizing aspects and its inherently

> disempowering and dehumanizing aspects will determine whether it is reversible or irreversible, a passing phase or a fundamental revolution in the evolution of human society.
>
> In July 1998, the *New Yorker* ran a cartoon that showed two long-haired, scraggly bearded Hell's Angels types . . . each . . . asking the other how his day went. One Hell's Angel finally says to the other: 'How was my day? Advancing issues led declines'.
>
> And so it is with globalization. Globalization is always in the balance, always tipping this way or that. Our job as citizens of the world is to make certain that a majority of people always feel that advancing issues are leading the declines. Only then will globalization be sustainable. (Friedman, 2000: 433).

The same can be said for the new forestry paradigm in Bolivia: it remains a work in progress, it is always in the balance, tipping this way or that in response to the latest set of economic, political or social events or pressures. The job of those of us who believe that the new paradigm is the way forward is to do our best to make certain that a majority of stakeholders in the 'new forestry' always feel that advancing issues are leading the declines.

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Recommended web sites

Bolivia Sustainable Forestry project (BOLFOR)
http://www.cadex.org/bolfor or
http://bolfor.chemonics.net

Bolivian Congress (includes the text of all major laws)
http://www.congreso.gov.bo/principal.html

CADEFOR (Centro Amazonico de Desarrollo Forestal/Amazonian Center for Susainable Forest Enterprise)
http://www.cadex.org/bolfor/PRODMERC/cadefor.htm

Ministry of Sustainable Development and Planning (MDSP) – Bolivia
http://www.rds.org.bol/

National Agrarian Reform Institute (INRA) – Bolivia
http://www.inra.gov.bo/