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**Forest management in Bolivia, Honduras and
Nicaragua: reform failures?**

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ABSTRACT

In this study we contrast forestry reforms and their stated objectives against the state of the forestry sector in Bolivia, Honduras and Nicaragua. Once we look at the policy failures that underlie the gap between policy objectives and the state of forestry, we find that stated policies are not implemented and their design is marked by intrinsic flaws. We conclude that there is a reform failure matched by a failure to reform. The Poverty Reduction Strategies of the three countries followed –and possibly reinforced– existing policy trends but they were unable to solve implementation problems and lack of coherence that mark the policies of the sector.

Keywords

Poverty, forest management, Bolivia, Honduras, Nicaragua.

FOREST MANAGEMENT IN BOLIVIA, HONDURAS AND NICARAGUA: REFORM FAILURES?¹

1 INTRODUCTION

Bolivia, Nicaragua and Honduras are endowed with large forest areas and vast tracts of their land can sustainably support only forest (e.g. UDAPE, 2004, Larson, 2003, Vallejos Larios and Guillén Coronado, 2006). While this is a constraint for the agricultural sector, it is also an opportunity for stimulating a forestry sector that could contribute to rural development and poverty reduction (e.g. Nygren, 2005; Oksanen et al., 2003; cfr. Wunder, 2001). In fact, the coincidence of natural capital – in the form of forests – and poverty suggests that forest management can be integrated in national policies to fight poverty (Dasgupta, 1993; Oksanen et al., 2003; Kay et al., 2007). Sustainable forest management and its potential to reduce poverty are currently high in the government agendas of the three countries, although policies to achieve these objectives can be traced back to at least a decade. One of the first examples of these policies is the establishment of the social forestry sector in the mid-1970s in Honduras. More recently, the Poverty Reduction Strategy Papers (PRSPs) of the three countries take account of the potential of forest management to reduce poverty (Gobierno de Bolivia, 2001; Gobierno de Honduras, 2001; Gobierno de Nicaragua, 2001), forestry figures prominently in the National Development Plans of Nicaragua (Gobierno de Nicaragua, 2005) and Bolivia (Gobierno de Bolivia, 2006) and the new forest law of Honduras –approved in September 2007– also contains a poverty component.

The forest management approach has largely mirrored the trends in the development discourse: in the 1970s emphasis was given to the role that the state should play in forest management, in the 1980s reform efforts attempted to privatize the forest and involve commercial loggers in the management, with oversight of state organizations. Since the 1990s, the mainstream discourse on forest management focuses increasingly on participation, decentralization and the involvement of communities and smallholders in forest management.

This comparative analysis highlights common patterns and differences in the forestry sector across the three countries. We provide an assessment of the sector and a systematization of the factors that block sustainable forest management, contributing to the understanding past reform failures and to the ongoing discussion of possible ways forward. In this paper, we focus on the lack of implementation and on the inconsistencies in the regulatory framework

¹ This work is part of the Poverty Reduction Strategy Paper research project (see www.iss.nl/prsp) and the financial contribution of SIDA is gratefully acknowledged. I would like to thank Kristin Komivez, Geske Dijkstra, Cris Kay for their comments and various contributions. I would also like to thank Juan Carlos Aguilar and Rafael del Cid for their support during fieldwork.

This study is dedicated to Mario Guifarro, killed while working for the protection of the Biosphere Tawahka and the enhancement of the welfare of its inhabitants.

and show how they represent a formidable obstacle to the success of the reforms. A special emphasis will be put on how forest management has been included in the Poverty Reduction Strategy Papers (PRSPs) and in the National Development Plans of the three countries, and how this inclusion has (or has not) affected the formulation and implementation of policies in the forestry sector.

We find that the potential of forest management for development and the emphasis in policy documents and in government's discourse are at odds with the situation in the forest. Notwithstanding the PRSP process, forest management policies –in the three countries– are marked by a lack of implementation and crucial parts of the regulation are still informed by older approaches that have already been proven unviable. In other words, in the three countries there is no transposition of principles stated in the official policies to the situation on the ground and the policies themselves show little coherence. As a result, in the forestry sector we find widespread illegality, policies that make life harder to the (few) actors who are trying to operate within the legal framework, high deforestation rates, and in general little socio-economic benefits arising from forest management.

2 FOREST MANAGEMENT AND DEVELOPMENT

A framework for the evaluation of forest management

Let us start with outlining a framework for the evaluation of forest policies and their impact on forest management. Many aspects of forestry might come up for evaluation and a number of methodologies can provide guidelines for judging whether forests are managed properly. Specifically, environmental economics' prescriptions suggest criteria such as optimality of the extraction rate of logs, productivity of forestry activities, and optimal rate of conversion of forest areas to alternative use (e.g. Bulte et al., 2000); in general these criteria evaluate the efficient use of forest resources. While these standards can provide indications of how forestry is contributing to the economy and highlight relevant aspects of forestry, the prescriptions based on them are seldom recognised by policy makers and social actors as relevant (Bromley, 2004). In this paper we will follow the more pragmatic – and arguably more useful – approach of evaluating policies with respect to the objectives they are meant to achieve.² These objectives have been articulated in numerous policy arenas and in the three countries there is a consensus that emerges from institutional documents and conversations with stakeholders: the objective is sustainable management from the environmental, social and economic perspectives.

² For a discussion of philosophical underpinnings of this choice and for a discussion of pragmatism in the context of economic analysis of environmental policies see Bromley, 2004; 2006.

The environmental side of sustainability is expressed in terms of maintenance of forest cover and of conservation of forest quality, the latter primarily in protected areas. In the paper we focus on forest management and extraction: they involve a larger part of the forest – if compared to protected forest – and affect the majority of the rural poor; the main environmental objective here is establishing sustainable forestry and maintain forest cover, but not strict conservation. Our main indicators of success (or lack thereof) are deforestation rates which are available in the three countries.

Overall, forest management should be a part of rural development strategies and its impact on poverty could be classified in social and economic terms. The social perspective emphasizes that the poor need to benefit the most from forestry and policies should ensure not only the development of the sector, but also encourage the participation of the poorest part of the rural population is encouraged. The various policies that promote pro-poor forestry fall under the common name of ‘social forestry’ and are articulated in different ways in the three countries. In Bolivia it is community forestry that is relevant, in Nicaragua it is forestry undertaken by small-holders and in Honduras by cooperatives. The relative success of these initiatives in the three countries will help us assess the achievements of the sector in terms of social objectives. From the economic perspective relevant indicators will be employment, generation of revenues for the government, contribution to the export sector and to general economic activities.

Finally, the development of legal forest activities and the downsizing of illegality is an overarching criterion. On the one hand, formal regulations contain safeguards that should guarantee environmental sustainability; on the other hand the economic potential of forest exploitation requires levels of investment and market conditions (in terms of prices, volumes, delivery and reliability) that are not compatible with illegal activities.

Approaches to forest management

The objectives of forest management have been changing over time and their evolution is mirrored by new policy models. The scientific forestry approach was developed in Europe and by the end of the 19th century it was transferred to the USA and to many developing countries (see Balogh, 2002). This approach is based on scientific management and its distinctive features are that the management systems are clearly identified in the law and regulations; that these systems are based on scientific models implemented by professionals dismissing local knowledge in favour of the knowledge transmitted via formal education; that they are informed by a command & control approach with a focus on enforcement and the assumption that forestry professionals and state agents are reliable.

In general this model dismissed local actors, neglected forms of knowledge not sanctioned by science and the whole system was geared towards production and extraction of wood (i.e. to the establishment of a monocrop system; Shiva, 1993). Another feature worth stressing is that such model rests on strong assumptions on the effectiveness and capability of state institutions to implement the law and assure enforcement. These assumptions are at odds

with the reality of the field of forest management in many developing countries where these actors and the institutions that frame their actions are characterised by low resources and high corruption levels (e.g. Pellegrini, 2007; Robbins, 2000).

The general failure that marked the implementation of the scientific forestry approach –especially in developing countries– to manage sustainably and equitably the forest stirred a movement towards more market-based policies and on economic incentives to maintain and manage efficiently forests (e.g. Repetto and Gillis, 1988). Also international financial institutions included in the structural adjustment programs several requirements with respect to privatization of natural resources, including forests. These changes were matched with the emphasis on securing property rights –often understood as ‘private’ property rights– and on avoiding the ‘tragedy of the commons’ (Hardin, 1968), beliefs on self-regulatory powers of markets and the central policy recommendations springing from this approach were privatization and market-based incentives.

Also the move to privatize the forest fell short of its ambitious objectives while emerging evidence showed that local communities operating autonomously often achieve superior outcomes in terms of natural resources management when compared to centralised systems and private agents (see Ostrom, 1990; Folke, 2004; World Bank, 2008). This evidence contributed to a renewed appreciation of traditional ecological knowledge and of management systems based on collective action at the local level and made it also possible to focus on social inclusion as an objective of forest management. In sum, over time forestry policies in developing countries moved away from state control towards privatization followed by a more socially-oriented approach that emphasises local institutions, participation and decentralization. The PRSP process has taken place within this paradigm change and some of its features (e.g. participation and inclusion) certainly belong to the evolution in mainstream development thinking that brought forestry reforms at the order of the day.

Sources and organization of the analysis

This study is based on fieldwork realised in Bolivia in April 2007 and in Honduras and Nicaragua in July and August of the same year. We did over 100 interviews with –among the others– government authorities (local and national), academics, community leaders, inhabitants of rural areas, business associations, entrepreneurs, cooperatives, trade unionists, international donors, multilateral financial institutions, and non governmental organizations. Also a number of secondary information sources were consulted together with legal and policy documents. To check the information that we gathered, we used triangulation: asking different actors their perspectives, controlling them with secondary sources and verify whether they were coincident.

In the following analysis we briefly outline the state of the forest in the three countries, showing how the objectives of forest management are missed; then we discuss the policy frameworks that produce these outcomes. The unsatisfactory state of affairs in forest management, that we highlight here, is

widely recognised in each of the countries and the political establishment is continuously pressured to ‘reform’ the sector. Here we show how these tentative reforms are truncated and we give some recent examples of instances where new forestry policies are still grounded in the old assumptions of scientific forestry and do not contribute to a translation of new policy principles in new forestry practices. We also show how the PRSP process falls in line with ongoing developments in the sector and that it is difficult to distinguish any impact on existing policies.

3 BOLIVIA

The state of the forest and the potential of forestry

Bolivia has 59 millions hectares covered with forest – 54.2% of the total area – and is one of the ten countries in the world with the most primary forest (FAO, 2007). Deforestation in the period 2004-2005 is estimated to be up to 1% of forest cover per year (Wachholtz et al., 2006).³ Given the size and the quality of Bolivian forests, this rate indicates major forest loss and environmental damage.

The Bolivian Government, supported by donor agencies, at the end of the 1990s has decided to adopt an advanced method of land use planning matching biophysical characteristics of the soil with a participatory approach to public policies (Rojas et al., 2003: III, 12); these land use plans provide an opportunity to estimate the potential of forest management by comparing the area suitable for forest management with the area actually under management. In 2001 a decree based on the land use plans identified around 40 millions of hectares as permanent productive forest (“tierras forestales de producción permanente”): land whose use could only be forest. Out of the 40 millions hectares, 10.7 millions hectares are protected areas and 2.4 millions have some restrictions related to the provision of ecological services; hence around 30 million hectares could be used for sustainable logging and the extraction of non-timber forest products (UDAPE, 2004; Pacheco, 2006a: 18, 51), but only 8 millions hectares – less than 30% of the potential – are currently given in concession and have a management plan and this area decreased in size in 2007.⁴ This gives a measure of the state of affairs when compared to the potential of forestry: while only a small part of the forest is exploited according to the formal management system, the rest is either left unexploited, or degraded with illegal logging, or affected by land use change.

Even though so little of the Bolivian forestry potential is exploited the sector gives a remarkable contribution to the national economy: currently the forestry sector is contributing directly to around 3% of GDP and employs

³ According to FAO, the yearly deforestation rate for the period 2000- 2005 is 0.41% (FAO, 2007).

⁴ Terrazas-Sedlak (Cámara Forestal), 2007, personal communication.

75,000 people. The majority of economic activity is in the timber sector, but notably the Brazilian nuts' production contributes to 0.35% of GDP and employs 22,000 people (UDAPE, 2004).⁵ These data include only legal operations noted in the national accounts direct economic values, omitting environmental services altogether, but priceless services offered by the forest guarantee the viability of other economic sectors and the provision of water. The management of forests for the extraction of timber and of non-timber forest products adds to these services and can provide direct incentives for the conservation of the forest. Also, to the official contributions to the GDP we must add non-marketed economic benefits. In the case of poor households in the rural areas a substantial part of consumption comes directly from the forest; data at the national level are not available, but household surveys for Tsimane' societies suggest that forest products can represent more than 50% of total consumption (see Godoy et al., 2002: 404).

The logging sector is marked by lack of investment, and entrepreneurs indicate that juridical insecurity is limiting any inflow of capital in the limited areas that are under concession. Furthermore, firms operating in the sector are wary of the new emphasis on social forestry and of the fact that some concessions have been reverted during the land reform process.⁶

Transportation costs represent the highest share of total costs of production and marketing of timber at an estimated 42% of the total (UDAPE, 2004). Certification would be a way to achieve higher values per volume and reduce the incidence of transportation costs: certified wood gathers a 5 to 51% price premium when exported from Bolivia (Nebela et al., 2005). As of October 2007, Bolivia is the 7th country in the world in terms of Forest Stewardship Council (FSC) certified forest with 1.8 millions hectares (Forest Stewardship Council, 2007b) and 46 certified companies. This is an important achievement for the sector, it must be noted though that the momentum of certification has been slowing in recent years and the certified area under management might start to decrease if certified forest concessions are revoked in the land reform process. Moreover, price premiums associated to certified wood rarely trickle down to the communities: the experience of community forestry in the country is that communities are not getting better prices for their products following certification (Rodas et al., 2005:32), or when they do gather higher prices this happens only thanks to external support from non-profit organizations (Stegeman, 2003: 31). In any case, obtaining higher prices

⁵ Another factor – apart from the limited area under management – that contributes to the slight contribution of the sector to the Bolivian economy is low productivity. The extraction focuses on few high value species and the result is that the average extracted volume is 3 m³/ha, and the estimated potential is 15 m³/ha (UDAPE, 2004; Benneker et al., 2005) and the transformation process is also wasteful at around half of the potential (Ibáñez-Chávez, Prefectura de La Paz, 2007, personal communication).

⁶ Terrazas-Sedlak (Cámara Forestal), 2007, personal communication; “Forestales en alerta”, El Deber, 16/1/2007.

is an important objective of certification, but the benefits include improvement of entrepreneurial and administrative capabilities (i.e. increase in transparency, improved planning) that can be as, or more, important than more favourable market prices (see Salazar and Gretzinger, 2004a: 42-46). Overall, the diffusion of FSC certification can be considered a success of development cooperation qualified by the fact that without the support of donors there is still little practical interest in certification within communities.

In sum, while forestry gives an important contribution to social and economic development of the country we find evidence that its potential is largely unexploited. Now we turn to the policy framework that created this situation.

The policy framework

In the mid-90s the sector was reformed: Bolivia's legal framework attempted to make access to forest resources more "democratic" and the approval of the forestry law ("Ley forestal", 1700, Gobierno de Bolivia, 1996b) was a milestone providing instruments for the poor to exploit forest resources in a legal way. This change followed the trends mentioned above and its stated objective was achieving social inclusion and making communities stewards of the forest through a new social orientation of the legal framework. Once the sector is analysed after ten years from the approval of the law it appears that the legal framework has more a nominal rather than a factual value and the policies that should have lent substance to legal predicaments were never put in place. These problems of implementation are compounded by actual contradictions that were present already in the formulation of the new policies.

The forestry law was enacted during the so-called "second generation reforms" of the mid 1990s. After the structural adjustment programs of the 1980s (the "first generation of reforms") that liberalised and opened the economy, the government of Bolivia focused on improving matters in the social sphere. The forestry law reflects the emphasis of the government of the time: it provides a legal framework whose stated aim was to democratize the access to the forests – allowing marginalised communities to take advantage of natural resources while protecting the environment. The main instruments to that purpose were the recognition of rights of local social organizations ("Organizaciones sociales de base") and of indigenous communities. In the same year, the law of land reform ("Ley INRA", Gobierno de Bolivia, 1996a) would have complemented the forestry law allowing land ownership to be transferred to the poor.

With respect to the conservation aspects of the law, the legal framework provides that in "permanent productive forest", independently from the legal ownership of the land, land use change is prohibited. The forest must be managed according to a 20 years management plan and for state-owned forest

auctions should take place and concessions be distributed accordingly.⁷ A system of royalties should contribute to make the system self sustainable (financing investment, the regulatory framework, and partially contributing to financing local institutions).⁸ Extraction should follow management plans approved by the Forestry Superintendence (“Superintendencia Forestal”) that has the role to collect royalties and verify that the legal provisions are not violated. The structure of the model did focus on specialized knowledge and for its enforcement the capability and honesty of forestry professionals (drawing up and implementing management plans) and of state agents (overseeing the whole process) were fundamental. Overall, the regulatory framework set up by the 1996 law contained management modalities and enforcement structures informed by the scientific forestry approach, together with social objectives and inclusive measures in line with the latest developments in forest management thinking.

The Bolivia Poverty Reduction Strategy Paper (Gobierno de Bolivia, 2001) includes forest management as an instrument for mitigating environmental risks and vulnerability and contains indications that policies should promote sustainable and equitable utilization of forest resources. The PRSP contains a succinct reiteration of the principles already contained in the forestry law –and summarized above– and an emphasis on implementing those principles and on creating alliances (i.e. including social actors) throughout the sector and the provision of support to the sector through technical assistance.

Even though several Bolivian governments agreed and contributed to the present framework, the only institutions in Bolivia that have provided funds and put into practice projects that implemented the spirit of the legal framework in the forest sector have been donors, NGOs, and private foundations. Most notably, the American, Dutch, Swedish, and Swiss cooperation have invested funds and supported NGOs and foundations (such as Conservación Internacional, Puma, and Fundesnap) in the forest sector. Experiences of community forestry, extension services, and forest management that followed the legal framework and anticipated the more recent emphasis on the implementation of policies to support the poor through forest management are among these. 74 experiences of communal

⁷ The law has been criticised for not allowing enough in terms of local decision making (Larson, 2006). Furthermore, given the lack of implementation of the law, not enough information is being collected on natural regeneration and no management practices to accelerate the reproduction of the most valuable species are implemented (Fredericksen et al., 2003). Under current management practice there is some evidence that forest regeneration cannot be achieved in the 20 years cycle (Dauber et al., 2005).

⁸ The system has changed in 2003 (Decreto Supremo No 27204) following the crises on international prices of wood and the consequent lack of capability of logging companies to pay the royalties (Fredericksen et al., 2003: 40, Pacheco, 2006b: 24, 36). Now, the companies pay effectively 1/20 of the royalties and a small tax to finance the administration of the Forest Superintendence. As a result, the revenues to the state administration and enforcement capability of the Superintendence have both been diminished.

forest management, on a total surface of 876,966 hectares has been recorded in May 2005 (Benneker et al., 2005: 12). Since the government in Bolivia wants to make steps in similar directions, independent studies and assessments of past experiences might help to evaluate the potential and to orient these programs. The existing assessments cast some doubts about the possibility to implement community forestry at a rapid pace and through standardised policies.⁹

With respect to implementation, over time successive governments contradicted the spirit and the word of the law. The spirit of the law was violated because granting the legal right to access forest resources to marginalised social actors was not sufficient for them to exploit this opportunity. Unless the resources necessary for undertaking sustainable management are also granted to the same communities, they are not going to have technical and financial resources to draw and implement forest management plans. Also the letter of the law was violated by the Bolivian government itself; among the violated legal provisions the “Fund for forestry development” (FONABOSQUE, “Fondo Nacional de Desarrollo Forestal”) was never activated (Pacheco, 2006b: 41). Moreover, only the first head of the Forestry Superintendence has been nominated according to the procedures established in the law –that are meant to guarantee that the figure is independent from the government – and the rest have been *ad interim* (i.e. simply appointed by the government). Paradoxically for a sector marred in illegal practices, the private actors in the forestry sector have themselves intimated to the government to respect the law.¹⁰ Additionally, the fines that the forest superintendence gives go unpaid, royalties are not exacted, and the whole sector is marred by illegality. Finally, the legal framework is evaded on the ground because state institutions do not have the necessary resources to control operations in the forest. Information on deforestation is available almost in real time – thanks to a geographical information system financed by the German cooperation (Wachholtz et al., 2006) – but the Forest Superintendence is so badly equipped that it cannot intervene even against macroscopic violations of the law.

The problems of enforcement and lack of operational capability of the forest superintendence (that we mentioned above) are –on the one hand– a flagrant contradiction with the assumptions implicit in the centralized system of enforcement and –on the other hand– the structure of enforcement is at odds with the principles of decentralization and participation that inspired the reform. Furthermore, the same contradictions mark other aspects of the regulatory framework such as the use of the system of forest management

⁹ For examples and evaluations of cooperation projects see Robertson and Wunder, 2005; Endara Agramont and Villca Huanaco, 2006; PROBONA, 2006; Proyecto BOLFOR II, 2006; Stegeman, 2003; Benneker *et al.*, 2005; Stegeman, 2005; COSUDE, 2007.

¹⁰ See the requests to the Bolivian Government that were put forward in the resolution of the 1er. Congreso Forestal Nacional: “El Sector Forestal dio 60 días al gobierno para cumplir la ley”, <http://www.cfb.org.bo/CFBInicio/CongresoForestal/boletin.notaNF02.htm>

plans that follow nationally standardised management frameworks and do not allow local knowledge to play any role. We do find intrinsic contradictions in the model that has a social orientation, but still has important instruments and whole of the enforcement mechanisms anchored to older paradigms of forestry.

The government of Evo Morales –who took power in January 2006 – is reiterating the objectives of the legal framework and the reforms that it is promoting are inspired by principles that are similar to the ones of previous reforms, but the government is arguably taking them more seriously and paying special attention to indigenous issues that are linked to social exclusion and emphasizing community forestry as a tool for achieving the goals of poverty eradication and rural development. In particular now greater emphasis is given to the role of indigenous communities and social groups, but at the same time the government is promoting the creation of a state enterprise; this initiative might add to existing contradictions of the whole approach and does not take into consideration the lack of entrepreneurial capabilities in the state and the history of failures of such enterprises in Latin America throughout the 1970s.

The National Development Plan (PND, “Plan Nacional de Desarrollo”) includes a chapter on natural resources, where forestry is focal (Gobierno de Bolivia, 2006), but the private sector and forest on private land hardly gets any mention.¹¹ Also, in the Development Plan for the Agriculture and Forestry sector (Plan de Desarrollo Sectorial – Revolucion Agraria y Forestal, Gobierno de Bolivia, 2007) the private sector is mentioned only a few times and the plan indicates that in the future forestry will be based on communities, small producers and state enterprises and institutions. Finally, the latest declarations of government ministers confirm that there is the intention to establish a state enterprise in the forestry sector, and to tax the export of timber. Both interventions run the risk of damaging existing companies operating legally in the sector and the association that represents the interests of the private sector reacted negatively.¹²

The past governments and part of the cooperation have focused on the private sector, that – as seen above – achieved some successes in terms of its economic development and some aspects of its operation improved (e.g. certified areas). New policy interventions seem to create an uncertain framework damaging existing economic operations without really establishing a viable alternative. Considering that the potential of the forestry sector is already underexploited, that there is a high deforestation rate, and the lack of realistic evaluations of the timing and modalities for developing community forestry,

¹¹ For example, in the same National Development Plan the chapter on tourism promotes community ecotourism, but also stipulates the need of alliances between the social sector to be developed now and the existing private sector. This is in contrast with the forestry chapter where such alliances are not envisaged.

¹² “Preocupación en sector forestal por anuncio de empresas mixtas”, El Diario, 11/9/2007.

the existing private sector should be considered a partner in the development of a complementary social sector.

4 NICARAGUA

The state of the forest and the potential of forestry

Nicaragua has more than 5 million hectares – 42.7% of its territory – covered by forest and the yearly deforestation rate for the period 2000- 2005 was 1.3% (FAO, 2007). Data on land vocation at the national level are not available; signalling that land use planning is not developed yet. The total market value of wood products, timber and non-timber is estimated to be 43 millions dollars in 2005 (FAO, 2007). These estimates are biased downwards because of self consumption and unreported illegal logging; the latter estimated at an astounding 70-80% of total volumes extracted, with illegally extracted logs marketed at much lower prices (Richards et al., 2003a: 4). To date Nicaragua has only 11,500 hectares of certified forest and a total of 11 certified companies (Forest Stewardship Council, 2007a), a symptom of the underdevelopment of the sector. Summing up, also in Nicaragua we have evidence of serious environmental degradation and of a contribution of forestry to the national development that is lower than its potential.

The policy framework

The Poverty Reduction Strategy Paper (PRSP) included objectives in terms of approval of a new forestry law by 2002 (which was approved, albeit at the end of 2003), deforestation is singled out as a source of ecological vulnerability, and forestry was already identified as one –out of four– of the strategic clusters to develop. Also, the National Development Plan (“Plan Nacional de Desarrollo”, Gobierno de Nicaragua, 2005) –that in Nicaragua can be considered a part of the PRSP process– includes a forestry cluster and aims at strengthening the whole forestry production chain, but there was very little implementation.

The main policy instruments setting the framework for the working of the rural sector are the forestry law and the logging ban.¹³ The forestry law established the conditions for forest management: the system of forest management plans is similar to the one of Bolivia and the organization in charge of regulation and control is the National Forest Institute (“Instituto Nacional Forestal”, INAFOR) (Gobierno de Nicaragua, 2003). Also in this case there is a model that contains remnants of the older scientific forestry approach and some social provisions. The law includes some incentives towards the development of the sector mostly in the form of tax deductions; a

¹³ For an introduction to the legal framework of the forestry sector see Larson, 2006: 35-37.

system that does little to promote forest management by the poor since they are not liable of paying little taxes in the first place. Moreover, there are deductions that would apply to small landholder who plant trees on their plots, but it is virtually impossible to take advantage of law's provisions unless there is support by some external organization (NGOs or donors) due to bureaucratic hurdles and obstruction by the institutions that should facilitate the process.

One of the few provisions, apart from the tax deductions mentioned above, that were meant to promote the management of forest on smaller scale and seemingly favour small landowners was the exemption from the need to have a management plan for areas of less than 50 hectares. The instrument to be used in such cases is the simplified plan, but it has been abused by large enterprises that presented several simplified plans for adjacent forest areas. INAFOR –who was financed by the royalties generated by authorized extraction activities– approved these plans turning a blind eye on their illegitimate nature (Global Witness, 2007:15).¹⁴ The situation changed after the “scandal of the River Kung Kung” that dominated the news in March and May 2006: a great number of trees were claimed to be illegally logged and transported on the river.¹⁵ As a response an emergency decree was enacted to stop extraction and was followed by a logging ban (“Ley de veda”, Gobierno de Nicaragua, 2006).¹⁶ The ban prohibits extraction of 6 species of wood, bars any logging operation in protected areas and within 15 kms from the national borders, it involves the army in enforcement and suspends the simplified management plans. The first employment of the army was to stop the traffic of illegal logs in the Kung Kung river, but a substantial part of the logs sequestered and under the surveillance of the army disappeared.¹⁷ Some analyses suggest that the logging ban has not been able to stop illegal logging and that deforestation rates might have increased after its approval (Guzmán, 2007). On the one hand, these happenings show how the centralized enforcement system oriented to extraction of resources failed to implement the pro-poor mechanisms in the law. On the other hand, it shows that the reaction of the state, again focusing on centralised enforcement mechanisms, is failing to produce the intended results and illustrate how the regulatory framework contains traits of both newer and older approaches to forestry coupled by implementation problems. In addition, the logging ban is a formidable obstacle to any future development of the sector as it forbids the legal extraction of the most valuable species.

Also in Nicaragua the forestry sector has been assisted by donors investing in the rural sector and by NGOs. PRORURAL is supporting institutional

¹⁴ See also “¿Quién está detrás de mafia maderera?”, Confidencial, del 07 al 13 de mayo 2006.

¹⁵ Subsequently, the court cases initiated by the loggers have shown that most of the logs were being extracted legally with simplified plans authorised by INAFOR.

¹⁶ Another effect has been the criminalization of forestry activities (Larson et al., 2006: 67).

¹⁷ “Alerta por tucas extraviadas”, El Nuevo Diario, 26/11/2006.

strengthening of INAFOR, the Interamerican Development Bank is financing a rural extension program with a large forestry component (“Programa Socio Ambiental y de Desarrollo Forestal”, POSAF), implemented by the Ministry of Natural Resources¹⁸ and GTZ has a Natural resources program (“Programa de Recursos Naturales”, PRORENA). The WWF is promoting a project on community forestry that is particularly successful and is the only case of community management that has achieved certification in the country (Salazar and Gretzinger, 2004b, MAGFOR et al., 2005: 122).

5 HONDURAS

The state of the forest and the potential of forestry

Honduras has 4.5 millions hectares – 41.5% of the territory – covered by forest and the yearly deforestation rate for the period 2000- 2005 was 3.1%; one of the highest in the world (FAO, 2007).¹⁹ The forestry laws define what portions of the territory is apt only for forest (according to parameters such as the steepness of the slope, or services such as watershed protection), and many areas that currently have a different land use are supposed to revert to forest. In fact, estimates from the Honduran Forest Development Corporation (COHDEFOR, “Corporación Hondureña de Desarrollo Forestal”) indicate that 87% of the country has forestry vocation (Vallejos Larios and Guillén Coronado, 2006:13), but land use planning at the national level – identifying the best use of each plot – has not been implemented. The value of forest products – timber and non timber – is estimated at 63 millions dollars in 2005 (FAO, 2007) and there are 60,000 people employed directly in forestry (Richards et al., 2003a: 15). To these figures self consumption and illegal extraction must be added. An assessment of the dependency of indigenous communities on the forest found that between 15 and 40% of the total value of consumption – for two Tawahka communities – derives directly from the forest (Godoy et al., 2002:404). Furthermore, estimates of illegal logging range between a 80% of total volume extracted for broadleaf and 50% for coniferous species (Richards et al., 2003a: 1). Certification is not developed and the country has a limited amount of certified forest: 47,400 hectares (Forest Stewardship Council, 2007a) and only 6 certified companies. Overall, also in the case of Honduras we have evidence of forest management’s contribution to development, but also that much of its potential is unexploited.

¹⁸ See <http://www.posaf.org.ni/>.

¹⁹ 75% of forest is public (FAO, 2007), but tenure is so problematic that in most cases some individuals are in possession of state forests and a range of different estimates on land ownership are available from different sources.

The policy framework

The policy framework regulating access to forest resources was characterised by great confusion, before the law approved in 2007 is implemented, with at least 38 laws governing the sector (FAO, 2006). In this current framework, COHDEFOR has a department promoting the “social forestry sector” through local cooperatives (Richards et al., 2003a:24), but its impact is questionable. In the words of the president of the largest association of cooperatives, “many of the cooperatives are composed solely by one person with some documents in a briefcase”.²⁰ Furthermore, some cooperatives have been infiltrated by criminality, and local leaders have been corrupted by illegal loggers (Global Witness and CONADEH, 2006:10; EIA, 2005:4).

Corruption is a barrier to legal logging – it facilitates illegal operations and creates obstacles to legal ones – and evidence of it abounds in Honduras. Bribes are extorted also from certified community forestry operations and reportedly without bribes transport of legal wood becomes impossible (Rodas et al., 2005: 53). In the words of a forest official of COHDEFOR from the San Pedro Sula region “for the police the worst loggers are legal loggers: they do not want to pay bribes!”. COHDEFOR itself is a synonym of corruption – as recognised in public meetings even by its current director – and its abolition by the new law received unanimous approval.²¹ When during a field visit we met a convoy transporting illegally-extracted mahogany logs from the Tawahka biosphere one of the drivers expressed his confidence that he would not face troubles: in case the convoy would be stopped by any enforcement agent the owner of the wood would be able to “sort things out”. Shortly after our visit a member of a local NGO was killed, but no actions are undertaken even though the offender is a know drug dealer also involved in illegal logging. Also in the case of Honduras, we have traits of new management approaches mixed with older models –especially in terms of enforcement– and the associated implementation problems.

The failures of the system have prompted the birth of a strong environmental movement that is vocal, but faces numerous challenges. On the one hand, members of the movement receive threats from illegal loggers and some of its members suffered deadly attacks (EIA, 2005: III, 3-4). On the other hand, the judiciary treats environmentalists’ breaking the law – e.g. because of organizing road blocks – as members of criminal organization (using the tough legislation against organised crime) and make their opposition to criminal activities difficult.²²

²⁰ Andrés Solórzano (Federación Hondureña de Cooperativas Agroforestales, FECAHFOR), 2007, personal communication.

²¹ According to the current director of Cohdefor, the institution cannot ask to manage additional the funds disbursed for reforestation because it is widely renown for corruption. On corruption episodes involving Cohdefor see also EIA, 2005: 11-14, 17-18.

²² Víctor Ochoa (Movimiento Ambientalista Olanchano, MAO), 2007, personal communication.

Some experiments of communal management exist: several donors assisted the cooperative COATLAH (Rodas et al., 2005:50), and GTZ (the German technical cooperation) is supporting two projects of community forestry in Olancho (PRORENA, 2007). Other projects are promoting the extraction of logs and resins by cooperatives (Nygren, 2005), but in general the number of positive experiences is limited. Other projects are focusing on extension activities of farmers that are within protected areas, such as the ones of ICADE, and deal with forestry only indirectly. Again, alternatives work with financial, organizational and technical support and changes in the policy framework should help to decrease the level of support needed for undertaking sustainable forest management.

Also in the case of Honduras the PRSP included forest management. In the PRSP there is the objective of approving the new forestry law by 2002 (as mentioned above the new law was eventually approved in 2007) and developing a forestry cluster (Gobierno de Honduras, 2001). The strategy outlines the link between slash and burn practices, deforestation and land degradation and acknowledges the country's potential to develop a sustainable forest sector contributing to 'economic growth, employment generation and reduction of poverty, especially in rural areas'. The policy measures foreseen to contribute to the sector include support to small enterprises, provision of technological transfers and of community land management (in relation to solving land tenure problems). Also pricing strategies and payments for environmental services are mentioned as means to preserve forest cover and – given the high incidence of deforestation– also reforestation and plantations are mentioned as activities.

The approval of the new forestry law (in September 2007) created many expectations and support by environmental groups and other social actors, but its implementation started with a long delay in its publication and official enactment.²³ The law includes the abolition of COHDEFOR and the establishment of the Institute of Forest Development and Conservation ("Instituto de Conservación y Desarrollo Forestal"), more resources for enforcement and harsher penalties against those who commit forest-related crimes. It must be noted that 3 members of current cabinet (including the serving president) and the director of CODEHFOR are – or were – owners or employees of logging companies, a fact that casts doubts about the real intentions of the government. Apart from the new law, the forestry sector has been visible in the news and the government has been active on forestry issues. On the first day of his mandate, the president Zelaya indicated that 1% of the state budget would be used for reforestation and protection, and the army would be involved in enforcement. The declaration about the budget commitment has been repeated many times, but only one sixth of the amount has been disbursed.²⁴ Of the resources that effectively were employed for the

²³ "Aprobada la ley forestal", El Heraldo, 14/09/2007, the law was eventually published only at the end of February 2008.

²⁴ Ernesto Ponce (Secretaria de Recursos Naturales y Ambiente, SERNA), 2007, personal communication.

sector, the military absorbed 70% without producing any evidence that enforcement has improved; on the contrary some circumstantiated evidence – referring to specific episodes – suggests that the militaries tend to use their powers and resources to benefit from illegal logging rather than the combating it.²⁵ This is another striking example of how new policy interventions on enforcement systems are still modelled over older approaches; it also confirms how these enforcement structures are ineffective in improving compliance with the regulatory framework and how centralized enforcement agencies tend to become a part of the problem rather than a solution. In sum, also in Honduras we find lack of implementation of the regulatory framework together with policies that belong to older approaches of forest management.

2 COMPARATIVE ANALYSIS

Forest management and its failures

The unsatisfactory environmental outcomes of the current management regimes highlighted above are synthesised by the fact that all of the three countries have high rates of deforestation. Also from the socio-economic perspective none of the countries is able to fulfil its aspirations in terms of forest management: as seen above the experiences of with social forestry are limited and dependent on donors and the sector is underdeveloped. These results stand in contrast with the fact that the potential of forestry for poverty reduction has been recognised since a long time. The renewed interest in forestry might indicate a real concern, but reforms and policies have been announced (and in many cases are already in place) without proper implementation and are marked by intrinsic flaws. As a result the sector is characterised by an only apparent paradox: there is under-exploitation of most forest areas coupled with deforestation and permanent land use change. The PRSP process in the three countries followed existing trends in forestry policy and, while it might have helped to accelerate and achieve change, is not possible to recognise any major breakthrough due to it.

We can find the roots of these disappointing outcomes at the individual and at the collective level and we can think about ultimate and proximate causes of this situation (Bromley, 1999). Ultimate causes refer to the volition of individuals and organizations; proximate cases to the conditions that affect them. At the individual level, sustainable forest management and forest conservation are not the most profitable options and often they are not feasible; illegal logging and deforestation –at the level of economic agents– are caused by the desire to extract valuable logs and to convert land for agriculture.

In other words, illegal extraction and trade of timber is more profitable than legal alternatives and land uses other than forest are more profitable, at

²⁵ This was confirmed by numerous sources including researchers, environmentalists and developmental NGOs.

least in the short time horizon. A number of conditions determine this situation and they can be considered the proximate causes of deforestation; hereafter we mention some of the most obvious ones, but we are not proposing a comprehensive list. In general, the costs of operating legally are substantially higher than illegally and – given the widespread illegality – the legal sector faces unfair competition (Richards et al., 2003b). Furthermore, the sector is penalised with respect to activities based on alternative land uses (such as agriculture) (Contreras-Hermosilla, 2004: 1); a common request by those involved in forestry is that incentives should be set up to promote the sector, rather than try to regulate it further.²⁶ The conditions that contribute to this situation include the uncertain investment climate, the lack of financial services, and excessive bureaucratization.

Another reason of attrition between policy objectives and reality is at the collective action level; this level is the relevant one for the analysis of the reforms failures on which we are focusing on here. Public policy can be understood as collective action – we follow the institutional economics tradition – aiming at restraining, liberating and enabling individuals and organizations (Ostrom, 1990: 51; Bromley, 2004: 79). The public policy framework – as seen above – lacks the implementation elements that might enable economic agents (individually, or as an organization) to take advantage of economic opportunities associated with forest management. At the collective level, the ultimate cause of the dismal state of forest management is that collective agents did not put those policies in place.

These policy failures can be – at least partially – traced back to corruption at the political and bureaucratic level and to political will. Corruption – the abuse of power for private interest – is widespread in environmental policies and forest management is not an exception (Pellegrini and Gerlagh, 2006). Elites that have been appropriating natural resources are unlikely to change their course unless faced by coalitions of citizens that challenge them (Johnston, 2005). These elites have been able to reap huge profits through illegal logging and concentrating land ownership of land that changed use away from forest and they are able to exert their power on political actors; at times becoming directly involved in politics as in Honduras.

Also at the implementation level, state agencies in charge of enforcement are perceived to be corrupt in Nicaragua and Honduras and – as mentioned above – the phenomenon has been documented extensively. In Bolivia the problem is not perceived to be so large possibly because control exercised by the state is so tenuous that it is not necessary to resort to corruption to undertake illegal activities. While it is very difficult to control the forest with the type of centralised systems that prevail in the three countries, viable alternatives are not being implemented. The search for other enforcement models would indicate that decentralization with participation of local communities seems to be the only way forward where state agencies are weak

²⁶ Currently a ban on log exports is under discussion in Bolivia, although it was already experimented in the past with little results (Fredericksen *et al.*, 2003:38).

(see Pellegrini, 2007) and that a radical rethinking of forestry --and of the colonial models that still inspires it-- is necessary to let local communities benefit from forest management (Larson and Ribot, 2007). Also recent policy interventions in the sector are based on unrealistic assumption of state and state agent's capabilities; in Bolivia this is exemplified by the establishment of a state enterprise and in Nicaragua and Honduras it is reflected by the continuous focus on centralized enforcement structures.

Once we consider the problems in the sector and the challenges successful reforms will face, we might want to think about a reform process that is participatory already in its formulation and would include consultations of the actors that are involved in the sector and could contribute to a new system to guarantee coherence and avoid interventions informed by older approaches. The actors that are to become central in the new model should be elicited to express their concerns in an inclusive exercise. When we interviewed small holders and community organizations they have mentioned the problems that we highlighted above, but also a number of other issues. Their indications could serve as the basis for new reform programs and implementation of existing formal regimes. In this paper we followed a similar approach: we consulted the stakeholders and the potential beneficiaries of a reformed forestry sector on what the problems were blocking the development of the sector and their answer informed our analysis. For example, we cited the case of enforcement failures and --barring illegal loggers-- these were mentioned to us as real barriers to sustainable forest management by all the actors (including enforcement agents that would blame each other). What we suggest here is similar to the dialogues that were part of the PRSP process and our belief is that their failure is due to the lack of political will necessary to organize them effectively and to implement the policies coming out of them, rather than intrinsic faults of the instrument. As any other participatory initiatives, dialogues are bound to fail if the policy makers do not support them.

If it is not easy to promote sweeping reforms and many of the failures might fall in the implementation stage, one way to tackle the shortcomings of the sector is to identify and act upon the most stringent problems of each country in a diagnostic tree process (a la Rodrik, 2006). Ultimately the development of sustainable forestry depends on the fact that individuals find it more convenient to illegally extract logs and change land use of forests, the most important barriers to sustainable forestry in each country should be identified and acted upon.

The success of the new movement towards the development of social forestry will depend on solving the problems that affect the sector as a whole together with the problems of involving and organizing impoverished communities.²⁷ The challenge of establishing decentralised community-based

²⁷ This problems include the lack of entrepreneurial capabilities to satisfy reliably the market and one of the lessons coming from an analysis of community forestry in Bolivia is that it is important to start operations form the simplest possible activities (e.g. Stegeman, 2003: 31, 41).

systems that benefit the poor should not be underestimated (Nygren, 2005) and not all communities are ready or willing to undertake community forestry management: many projects face problems with corruption, mismanagement, and require a lengthy process to develop from simple harvesting logs to parts of the production chain with more value added. Typically, they require large resources and time and might work better if coordinated with the private sector rather than trying to replace it altogether. The first steps of community forestry could be integrated in existing private initiatives; for the poor to benefit from forestry affirmative actions and positive discrimination should be part of the policies (Larson and Ribot, 2007), without presupposing that the poor will be able to develop a new sector at once.

7 CONCLUSIONS

The forestry sector has the potential to contribute to rural development in Bolivia, Nicaragua and Honduras, but this potential is vastly underexploited. While deforestation rates are high in the three countries, the area of forests under management is far below what is feasible and the general policy framework is not conducive to the development of the sector.

We have argued that the regulatory framework of the forest sector in the three countries is marked by reform failures because important features of the policy framework are not implemented. At the same time, the sector is characterised by failures to reform: remnants of older approaches remain in crucial parts of the new systems, especially with respect to centralized enforcement; parts of the regulation and enforcement systems are in fragrant contradiction with the decentralized and participatory approach that should be underpinning the new policies. In this sense, the policy framework of forest management in the three countries is marked by a failure to reform matched by reform failures.

This is not to say that a full fledged reform re-orienting the system towards decentralization and participation would certainly work in every instance (Veron et al., 2006); the point is that the truncated moves towards decentralization and the current failures of the system cannot be attributed to the reform efforts, but rather to the lack of changes and of their lax implementation. The PRSPs seem to have played a limited role in the three countries: they confirmed the objectives of existing policies but did not contribute to any noticeable improvement of implementation nor highlighted the changes needed to have a policy structure coherent with the principles of participation and decentralization.

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