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**LAND REFORM IN BOLIVIA:  
THE FORESTRY QUESTION**

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## **Abstract**

In this paper we discuss forestry issues related to land reform in Bolivia. We find that although the current land reform satisfies most of the conditions that are necessary for adequately addressing development issues in the agrarian sector, it does not deal with many of the challenges related to forest management and actually contains provisions that come in conflict with the objectives of sustainable forest management. Given that a large part of the land that is being titled is actually forest land, the above mentioned omission and conflict with the objectives of sustainable forest management is critical and may have harmful ramifications for the preservation of forest resources as well as poverty alleviation of forest-dependent communities.

## **Keywords**

Forest tenure, forestry, land reform, agrarian reform, Bolivia.

# LAND REFORM IN BOLIVIA

## THE QUESTION FORESTRY

### 1 INTRODUCTION

There is ongoing debate over the interpretation of divergent country experiences with land reforms; given the available evidence on the evolution of the effectiveness of such policy interventions, some authors have reached the conclusion that land reform is losing potential to achieve the goals of poverty alleviation and rural development (Deininger et al., 2007), or that alternative – and seemingly less contentious policies – are better at achieving the same goals (cf. Dasgupta and Pellegrini, 2009). Nevertheless, the issue of land reform is cyclically resurfacing in the policy debate and it has come to the fore again in Latin America to deal with the rooted inequalities in the region (de Janvry and Ground, 1978; Deininger and Binswanger, 1999; Kay and Urioste, 2007).

One Latin American country where the issue of land reform is paramount in the public discussion of measures to deal with inequality and promote rural development is Bolivia. In this paper we analyze the Bolivian experience with the current round of land reform that started in 1996 and continues to this day. Our method is to evaluate the ‘standard’ requirements for successful land reform –as they are identified by the literature on land and agrarian reform and as applied in Bolivia– with respect to the ‘special’ conditions that characterize Bolivia. These conditions include the necessity to address the development of a forestry sector, or to address the forestry question that we define here as the quest for a set of policies that promote the dual objectives of sustainable forest management and poverty reduction for the communities dependent on forests.

The first round of land reform was implemented in Bolivia in 1953, however –like many countries that experienced ambitious land reforms since the beginning of the 20<sup>th</sup> century– it was not successful in addressing inequality in assets neither in a lasting manner nor in contributing to socio-economic development (e.g. Kay and Urioste, 2007). These experiences stand in sharp contrast to successful land reforms: for example, in Taiwan and South Korea where land reforms have striking accomplishment in terms of inequality reduction, promotion of rural development as well as providing the basis for equitable national development (Kay, 2002).

A number of conditions for successful land reform are recognised in the literature and the complexity of these conditions is one of the reasons why many land reforms have failed to achieve their objectives (Thiesenhusen, 1995). Accordingly land reform might actually be an effective policy instrument but only when all the conditions are met and as a consequence, one crucial part of land reform itself becomes setting up the enabling conditions for its success.

The current land reform in Bolivia does satisfy many of the conditions that are necessary for land reform to adequately address development issues in the agrarian sector, but does not deal with many of the challenges related to forest management and actually contains provisions that come in conflict with the objectives of sustainable forest management. However, when we analyse the land that is being titled, we find that a large part of it is actually forest land.

However, the reform measures undertaken by the government does not include (nor is complemented with) provisions to address what we call the “forestry question”. A survey of the state of the forestry sector in general and its poor performance in the recent years makes us conclude that land titling *per se* is unlikely to give appropriate answers to the challenges faced by individuals and communities involved in forest management and that in the case of Bolivia the conditions for a successful land reform necessarily have to include the development of the forestry sector.

The linkage between land reform and forestry is little debated in the Bolivian context and in many instances state institutions seem oblivious of the nature of the land being titled. The issue, however, is relevant beyond Bolivia because the land reform process is coming to the fore again in Latin America and at the same time forests are being increasingly titled to communities (White and Martin, 2002; Sunderlin *et al.*, 2008) and we expect similar challenges to arise elsewhere. The discussion is also urgent as the issue of forest management has received little attention in the land reform literature (notable exceptions are Borras, 2006; Futemma and Brondizio, 2003; Alston *et al.*, 2000; Pacheco *et al.*, 2008).

In the next section, we summarize the conditions for successful land reforms as recognised in the literature and consider different approaches to land reform. Subsequently, we discuss the connections between land reform and forestry and provide evidence that most of the land being titled is forest. Next, we provide an assessment of the forestry framework and finally we focus on how the land reform process and the forestry question are interconnect in Bolivia. We find that if land reform is carried out neglecting the forestry issue it might not solve structural inequalities and might contribute to the problem of deforestation and forest degradation that, in turn, aggravate poverty.

## **2 LAND REFORM: VISIONS AND INSTRUMENTS FOR SUCCESS**

At some point in the last century land reform has been enacted in most Latin American countries with varied results (de Janvry 1981; Thiesenhusen, 1995). The primary objective of these reforms was to provide access to land as a means of livelihood to the landless or land-poor and in the process break down the structures of social domination and exploitation that prevailed in the rural areas. The moves were often also justified on grounds of increasing productivity on land by providing incentive to small holders to produce intensively and to invest more on the land (Berry and Cline, 1979).

The extensive literature on land reform, both theoretical and empirical, allows us to identify the key features of what might constitute a “successful” land reform. In this regard, we will focus on three specific issues: political will, tenure security and the role of complementary policies. We talk about success in terms of fulfilling the stated objectives of such a land reform policy as mentioned above.

A critical condition –probably the most important one– for land reforms is the political will to implement it effectively. Given distributive conflicts

arising with the reform and the fact that a constellation of conditions must be met, the simple enactment of laws does not suffice and continuing support and efforts are required for actual implementation and ultimately for success.<sup>1</sup> As much as attempts are made to design and implement land reform as a technocratic public policy initiative, genuine land reforms remain intense political acts due to their redistributive element. Political will might take the form of strong and determined governments, which see land reform as important (see the case of Taiwan, South Korea and China in Griffin et al, 2002). Alternatively, social movements outside the government may rally for land reform measures and force the government to implement them (Huizer, 1999). Social movements which culminate into revolutions and bring about land reform in the process are extreme cases where progressive governments come into power on the basis of popular demands where land reform figures prominently.

Another decisive issue for land reform is secure tenure, which in turn is crucial to promote investment and legal protection in the face of a political backlash that could try to reverse the outcomes of a land reform programme. Technically secure tenure can be achieved with a transparent system of land records, existing or to be established together with land titling. A well-known case with respect to policy reversals –that can take place if tenure is not fully secure– is that of Chile where substantial land reforms were repealed in steps after the coup against the socialist president Salvador Allende (see Thiesenhusen, 1995) and the issue of compensation that the Sandinista left after losing power at the end of the 1980s (Stanfield, 1995). In both cases the absence of definite land titles and transparent records were responsible for the plight of the initial land reform beneficiaries many of whom lost access to land as new regimes not favourable to land reforms came to power.

The presence of complementary policies, that within the agrarian paradigm include agricultural extension, credit, marketing, are most often necessary to ensure that agriculture becomes viable for marginal farmers who are the typical beneficiaries of land reform and the history of land reform is replete with cases where reforms failed precisely because they were not accompanied by such policies. Griffin et.al (2002) have raised this issue in the context of the larger focus of development policies and the presence of the so-called “urban bias” and “landlord bias”. Urban bias relates to the unequal emphasis of policy making and resource allocation of the government on the rural sector especially agriculture which continues to engage the majority of the poor in developing countries (Lipton 1977). Landlord bias on the other hand works in the form of agricultural policies which are mostly designed for or are appropriated by the large farmers or landlords. If land reform is to be successful in ensuring a better standard of living for the recipients of land, government policies should be directed specifically at the small farmers and at

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<sup>1</sup> Land reforms can be traced back at least to Roman times when, between the V and the II century BC, four land reform laws were passed with little effect because of the resistance of the Roman aristocracy that held a firm grip on key state powers (Ankersen and Ruppert, 2006).

the barriers they have to overcome to increase the productivity of their lands.<sup>2</sup> From a holistic development strategy perspective as well, land reform should be implemented in a setup where agriculture-industry-services linkages are properly exploited. So land reform or even rural development should not be a stand-alone strategy (Borras and Mckinley, 2006). As Kay (2002) argues, in the East Asian cases (Korea, Taiwan), land reforms created a relatively egalitarian agrarian structure and thus provided the genuine basis of a broad-based industrial development.

While some of the instruments associated with land reform –as the ones mentioned above– are relatively uncontroversial, different visions of the agrarian question and of the purpose of the integration of the peasantry in the modern economic sector inform different approaches to land reform. Here we are going to present an overview of influential approaches and their diverse implications in terms of policy making with respect to land reform.

On the contrary of what could be expected given the experience of progressive and socially inspired governments across the globe that are at the forefront in formulating and implementing land reform legislations, Marxists can be rather sceptical of land reform. In particular the creation of a landed petit bourgeoisie (i.e. the beneficiaries of the land reform process) that would become a conservative peasantry can be seen as an impediment towards the achievement of revolutionary conditions (Bernstein, 2002). In any case, regimes inspired by Marxist ideals have often undertaken the most radical land reforms characterised by large land redistributions and (often uncompensated) expropriation of large landholdings (see Lippit, 1974 for China). Furthermore, these reforms went on promoting forms of management such as cooperatives; also in order to contrast the risk of creating a conservative peasantry just mentioned. (Lipton, 2009)

In the communitarian approach, the redistribution of lands should not benefit –at least not uniquely– individual owners. Communal ownership is recognised usually because of cultural and social traditions associated with indigenous populations and refers to traditional/existing organizational forms; but at times it is promoted because of the expected socio-economic and environmental benefits if compared to individual ownership (Bryden and Geisler, 2007). Instruments will include arrangements for forms of communal tenure (including cooperatives) and –possibly– forms of support such as agricultural extension given to social groupings rather than to individual farmers. In general the partner of the land reform agency and of the government will not be (near-) landless individuals, but organizations grouping several individuals and households.

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<sup>2</sup> Another condition that is often mentioned is that minimum land to man ratio or a minimum available land to (re)distribute. In fact, land scarcity is used often as an excuse against land reform even though some of the most successful cases of land reform have been implemented in agrarian societies with extreme scarcity like Taiwan and South Korea (see Griffin et al 2002). These experiences have shown that the scarcity problem is not a crucial one and land abundance is not a necessary condition for successful land reform.

These two approaches (Marxist and communitarian) are often characterized by a redistributive component: the allocation of land to the land-poor sections of the population. The land reallocated can come from landed population (e.g. absentee landowners), but also from state-owned land. These redistributive reforms are in clear opposition to neo-liberal (market-led) reforms propagated recently by several multilateral organisations, including the World Bank (Borras, 2003).

Market-led reforms are oriented towards the promotion of efficiency and increased productivity, to be obtained with the integration of the land into the market and the facilitation of markets for agricultural produce. The land market is established securing property rights and freedom to exchange land; the standard market mechanisms will lead to an efficient allocation of the productive assets. The most efficient producer –assuming well-working financial markets– will be able to discount the highest future production and to buy the land for a higher price if compared to less efficient producers. Hence allocation through unconstrained markets would be automatically associated with productivity increases (see Deininger and Binswanger, 1999).

The approach to land markets will depend on the approach to land reform. In many cases selling redistributed land is not allowed at least in the short run and this provision is often associated with Marxist and communitarian reforms. One example is the Mexican land reform, where the communitarian approach was complemented by institutions such as the *ejido* the land held in common could not legally be divided nor sold. Given that most beneficiaries of land reforms are extremely vulnerable to shocks both at the sectoral (e.g. crop failure) and the personal (death, marriage etc) level, there is always a risk of losing land through distress sale or using land as collateral for consumption loans which are never repaid. In order to prevent this situation, land sales should not be allowed for the first few years after land reform (Banerjee, 1999). Eventually, when the initial benefits of access to land has been realized, land sales might be permitted in order to allow more efficient allocation of land resources and reaping the benefits of access to credit that is open conditional on the use of land as a collateral. This concern about small peasants retaining control over their land has generated some extreme responses where even the land rental market has been made practically inoperative through the prohibition of tenancy (see the case of Kerala, India in Raj, 1983). This kind of move, however, might have severe negative implications with peasants engaging in underground tenancy without any rights. In the neoliberal approach, while some restrictions on sales and rentals can be justified, they should be temporary in order to allow investment and productivity to achieve efficient levels (Deininger, 2003).

### 3 FORESTRY AND LAND REFORM

#### 3.1 The forestry policy framework: connections with land reform

Forest dwellers and traditional communities in many developing countries are often characterised by the paradox of their proximity to abundant natural resources and their socio-economic marginalization (Dasgupta, 1993). With respect to forest resources this state can ultimately occur because of access problems (i.e. because communities lack endowments and entitlements over the resources), or because there are no economic conditions for the development of forest-based activities. Overall there is a consensus that the purpose of forestry policy is to combine the ecologically sustainable management of natural resources with economic and social objectives that include the transferring of endowments and entitlements to marginal communities and the development of a forestry sector (see Pellegrini, 2009).

We now discuss forest tenure and different approaches to forestry policies and their connection with land reform. The security of tenure is even more important for forestry than for agricultural land because of the long-term planning and investments that are necessary to undertake sustainable forestry. By nature the management and harvesting of logs follows much longer cycles than those common in agricultural practices, but also the production of non-timber forest products require long planning horizons since accelerated harvesting can degrade the quality of forest stands and compromise their potential productivity in the future. One extreme manifestation of the lack of tenure security in forests is the open access situation and the management problems associated (cf. Hardin, 1968 and Ostrom, 1990). In the open access case the products that have a market value in the forest will be rapidly depleted and forest degradation and/or deforestation follow. One fundamental instrument to achieve this security is that the land registry covers also forest, or alternatively that there is a reliable registry of forest ownership.<sup>3</sup>

Different approaches to forest management suggest alternative ways to address the forestry question. The scientific forestry (or command and control) approach is one that can be classified as technocratic: its focus is on forest management plans prepared by formally/professionally trained foresters and

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<sup>3</sup> While we are not mentioning all the conditions necessary for the development of forestry, another issue worth mentioning is the stability of the regulatory framework. While this issue is common to any sector in developing countries, is particularly important in the case of forest because of the long time frame necessary to organize any meaningful forest management. Changes in the regulatory framework can often suddenly make investments unprofitable; such changes include blanket logging bans, modifications of the species and products that can be harvested or of the forms of timber that can or cannot be exported (e.g. bans on the export of non-transformed logs). These changes in the regulatory framework generate problems with respect to the production strategies of forest owners and, ultimately, can backfire in the context of weak enforcement of the regulatory frameworks and result in illegal logging, forest degradation and accelerated deforestation (Pellegrini, 2009).

enforced in the field by state agents (Balogh, 2002). The approach neglects local traditional ecological knowledge, the social relations that exist in the forest and the linkages among local livelihoods and forest management; essentially the agency of local actors is ignored altogether. The orientation of the whole system is towards the efficient and sustained production of timber (i.e. the production of a monocrop; Shiva, 1993), to be achieved through measures that would create a favourable biological environment. The instruments to implement this model include a regulatory framework with clear guidelines on allowed activities and their organization (detailing extraction modalities and other management activities), an efficient forest service, training facilities for foresters and in general a well-working state machine to guarantee effectiveness and enforcement. This approach fits well in the dominant role of the state in the developmentalist paradigm of development hegemonic in the 1970s.

In contrast, the neo-liberal approach matches an emphasis on state failures (supported by abundant evidence of it from the 1970s experience in forest management in most developing countries) with a concern towards the tragedy of the commons and the perverse incentives that are created at the individual level when forest property rights are not well-defined or when they are in the hands of the state that often cannot enforce them effectively. As a result of this approach, the policy instruments will include the establishment of secure property rights –often understood simply as private property rights– and of the creation of the economic incentives promoting efficient exploitation of natural resources by individual economic agents and enterprises (e.g. World Bank, 2008). The access issue here would be regulated with market mechanisms: the most efficient management agents would be more productive and ultimately gain increasing access to forest resources.

Another approach –that has been gaining ground more recently and is part of the recent turn to poverty reduction in development discourse– is decentralization and community-based natural resources management. Overall this approach aims at solving the access problem of rural communities, recognising them as the owners of the forest and acknowledges the fact that communities – as it was emphasised in the literature on the management of the commons– are often better endowed to manage natural resources rather than state or private actors (Ostrom, 1990). This approach can be articulated in many ways: for example it can focus on partnerships and on the linkages across actors operating at different scales (Ros-Tonen *et al.*, 2007), or on the social sector emphasizing the need for community agency and empowerment (Larson and Ribot, 2007).

The evolution from approaches based on scientific forestry, to neo liberal and to decentralization is happening in a chronological order, but it is not a linear process nor is it actually possible for each approach to completely supersede previous ones. Furthermore, differences are not always so clear-cut and for example some strands of the communitarian approach are compatible with neo-liberal policies especially when advocating retrenchment of the state and the insertion of communities in existing markets (e.g. Chomitz and Buys, 2007).

As a result the policies that we see in practice are often inspired by a mixture of different approaches (e.g. Pellegrini, 2009), references to the fashionable ‘buzzwords’ in the development discourse might be misleading (Büscher and Mutimukuru, 2007) and in many respects Latin American countries have forestry systems still inspired by colonial models (Larson and Ribot, 2007).

### **3.2 Land reform, agrarian reform and forestry policy: synergies, neglect and conflict**

Land reforms may be characterised by synergies with forestry policy, but the nesting of land reform in the agrarian reform paradigm is often associated with a neglect of forestry issues and even with provisions that conflict with the objective of sustainable forest management. The direct linkages and synergies are most evident on the land titling programs, when titling forests can be interpreted as a forest tenure reform (Pacheco *et al.*, 2008). Within the context of land reform, two aspects are especially relevant: titling of forest to poor communities (some of which are indigenous) and individuals and, generalised, increased security of rights over forest areas. In effect, through successful land reform marginalised communities obtain titles over forest and forest tenure security is increased fulfilling one of the conditions for sustainable forest management.

The embedding of land reform in an agrarian paradigm may result in the omission of forestry issues resulting from the change in tenure. The neglect of the forestry aspect of the reform would be all the more important in the case of communitarian approaches to land reform because for marginalized communities that are obtaining land titles over forests the challenges that any economic agent or private firm has to face to undertake forest management will be compounded by the complications of organizing collective action and overcoming structural, administrative, information, and capital deficits.

Conflict between the objectives of forest management and land reform may arise in cases where land reform is complemented by policies that promote land use change. A general point is that economic activities related to forests should not be overregulated and that alternative land uses should not be promoted. It is the case in almost all countries that the regulatory framework requires a number of conditions –often including cumbersome bureaucratic requirements– to be met in order to harvest and commercialize forest resources legally, while economic activities related to alternative land uses –such as agriculture and cattle ranching– are typically exempted from similar requirements. Similarly, a number of policies in the agrarian reform package stimulate the development of agricultural and pastoral activities; examples are the subsidies that make agricultural and pastures lands more profitable that end up promoting the expansion of the agricultural frontier beyond socio-economic and ecological rationality (see Repetto and Gillis, 1988 and Binswanger, 1991). Taken together these type of regulations and incentives end up increasing the opportunity cost of forest and render land use change more convenient.

Furthermore institutional arrangements associated with land reform can also conflict with forest management and promote land use change, especially when deforestation is a requirement for secure tenure (Southgate and Runge, 1990) and property rights frameworks do not recognize tenurial arrangement that are common in forests (Bromley and Cernea, 1989).

#### **4 THE BOLIVIAN CASE: WHAT LAND AND WHAT REFORM?**

The Institute of Agrarian Reform (“Instituto Nacional de Reforma Agraria”, INRA), in charge of implementing the reform, does not possess details on the type of land being titled, but the majority of land requested by indigenous communities is covered with forest and the communities claimed more than 20 millions hectares of land (Pacheco, 2006a: 9).

Data from 2007 show that out of the total 2,139,806 has identified for redistribution 1,410,858 has are to be managed as productive forest (INRA, 2007: 72). In other words, almost 66% of the total area identified as state owned and available for redistribution for social and productive purposes (hence, excluding protected areas) is to be managed as forest. In contrast land classified as agricultural (for both intensive and extensive use) covers only around 181,123 has, or 8.5% of the total.

The Bolivian Government, supported by donor agencies, has adopted an advanced method of land use planning matching biophysical characteristics of the soil with a participatory approach to public policies. The land use plans (“Planes de Uso del Suelo”, PLUS) recognised the fragility of large parts of Bolivia, the threats posed by desertification and acknowledged the ecological services provided by forest. Accordingly, land use was to follow the vocation of the territory as suggested by the ecosystems’ characteristics, but at the same time it was recognised that the interest and the knowledge of local communities had to be taken into consideration in land planning.<sup>4</sup> As a result the formulation and approval of the PLUS was based on participatory principles and was the result of extensive consultations (Rojas *et al.*, 2003: III, 12). In 2001 a decree based on the PLUS identified around 40 millions of hectares as permanent productive forest (“tierras forestales de producción permanente”): land whose use could only be forest. Also the new constitution refers to the need of respecting the ‘vocation’ of the territory confirming that land should be managed sustainably according to its characteristics.<sup>5</sup>

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<sup>4</sup> Land use planning was implemented within the general orientation favouring participation of the Bolivian governments of the 1990s and was accompanied by initiatives such as the law on popular participation (“ley de participación popular”, Gobierno de Bolivia, 1994) and the national dialogues. In this policy context in order to deliver a good land use plan and a plan with chances to be implemented participation was considered a fundamental factor.

<sup>5</sup> (GOB, 2009 Artículo 387. I. El Estado deberá garantizar la conservación de los bosques naturales en las áreas de vocación forestal, su aprovechamiento sustentable, la conservación y recuperación de la flora, fauna y áreas degradadas).

Notwithstanding the objectives of maintaining forest cover on most of the land currently occupied by forest and the objective of sustainable forest management, the issue of forestry and its potential for poverty reduction is underestimated in the land reform process. However, given the prominence of forest land process, land reform in Bolivia has significant features of a forest tenure reform.

In the words of the Bolivian Government “it is known that formal access to land and forest [...] does not produce automatically benefits for local development” (Gobierno de Bolivia, 2007b; see also Larson and Ribot, 2007; Wunder, 2001). However, policies that should facilitate the communities in taking advantage of the new opportunities given by forest land titles and, at the same time, guarantee sustainable land use are not in place. The need of addressing the forestry question and the fact that under current conditions titling is not enough becomes clear once we look at the policy framework and the state of the forestry sector.

## **5 FOREST MANAGEMENT**

Now we turn to a discussion of the policy framework for forest management: our purpose is to outline the policy environment in which the land reform is going to be nested and question whether the forestry question can be addressed under these conditions. Next we will overview the (under-) development of the forestry sector that is the result of this policy framework.

Reform of Bolivia’s forestry sector occurred in the mid-1990s: the reform attempted to make access to forest resources more “democratic” and the approval of Forestry Law 1700 (Gobierno de Bolivia, 1996b) was a milestone that provided instruments for the poor to exploit forest resources in a legal way. This change followed the trend towards decentralization and community-based natural resources management and its stated objective is achieving social inclusion and making communities stewards of the forest through a new social orientation of the legal framework. However, ten years after the law’s approval the legal framework has more a nominal rather than a factual value and the policies that should have lent substance to legal predicaments are not in place. These problems of implementation are compounded by contradictions that were already present in the formulation of the new policies.

The law also contained environmental provisions: the forest must be managed according to a 20 years management plan, state-owned forest auctions should occur and concessions be distributed accordingly. A system of royalties should make the system self sustainable (financing investment, the regulatory framework, and partially contributing to financing local institutions). Extraction should follow management plans approved by the Forestry Superintendence 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 fundamental to its enforcement were capable and honest forestry professionals (responsible for drawing up and implementing management plans) and state agents (responsible for overseeing the whole process). Overall, the regulatory framework set up by the 1996 law contained management modalities and enforcement structures informed by the scientific

forestry approach, as well as social objectives and inclusive measures that were in line with the latest developments in forest management thinking (see Pellegrini, 2009).

At the state organizational level the Forestry Directorate is badly understaffed<sup>6</sup> and under-funded and the Forest Superintendence is not able to fulfill its regulation and control role, let alone take on board new tasks.<sup>7</sup> Still, the government is discussing the promotion of community forestry and creating a state enterprise to facilitate the operations of community enterprises. Overall, there is a striking contrast between the efforts, and the underpinning political will, to promote land reform and those for the development of the forestry sector.

The relative (lack of) success of the current policy framework becomes clear if we analyze a few indicators that relate to socio-economic and environmental outcomes. Out of the 40 millions of hectares, classified as forest in Bolivia, around 30 million could be used for sustainable logging and the extraction of non-timber forest products (UDAPE, 2004; Pacheco, 2006a: 18, 51),<sup>8</sup> but only 8 millions hectares – less than 30% of the potential – are currently given in concession and have a management plan.<sup>9</sup> Furthermore, the total volume of legally extracted logs is about 5% of the estimated sustainable potential (BOLFOR, 2009: 36). Taken together these data give a measure of the current state of affairs when compared to the socio-economic potential of forestry. Furthermore, according to FAO, the yearly deforestation rate for the period 2000- 2005 is 0.41% (FAO, 2007) and estimates for deforestation between 2004-2005 are as high as 1% of forest cover per year (Wachholtz *et al.*, 2006). Given the fact that around 54% of the Bolivian territory is covered by forest and that the country is one of the ten with most primary forest in the world (FAO, 2007), these deforestation rates imply that large expanses of (primary) forests are being lost every year. Overall, most of the forest is not following the legal management and the rest is either left unexploited, or degraded with illegal logging or affected by land use change and taken together these facts substantiate the failure of the current policy framework to achieve the objective of sustainable forest management.

## **6 LAND REFORM AND THE FORESTRY QUESTION**

Bolivia has already experienced two land reforms: one in the 1950s and one in the 1990s that is still to be completed. The first land reform was an outcome of the 1952 revolution and its aim was redressing the conditions of inequality and extreme poverty that were the very reasons for the uprising (Kay and Urioste, 2007).

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<sup>6</sup> As of April 2007 it was staffed only by 9 people based in the capital, La Paz.

<sup>7</sup> This state of affairs in these important institutions casts doubts on state capability to implement such policies.

<sup>8</sup> Of the total amount 10.7 millions hectares are protected areas and 2.4 millions have some restrictions related to the provision of ecological services.

<sup>9</sup> Terrazas-Sedlak (Cámara Forestal), 2007, personal communication.

The second major land reform legislation was enacted in 1996 (Gobierno de Bolivia, 1996a) but its implementation was so timid that only a fraction of land has been titled within the 10 years time frame stipulated in 1996. The Morales government, elected in 2006, is giving a new impetus to complete land reform and has also promoted a new law with a communitarian vision. For the current government, land reform is a flagship programme aiming to provide access to land to landless citizens, small landowners and to indigenous communities through land titles and security of tenure (Gobierno de Bolivia, 2007a).

While the lack of political will marked the implementation period of the 1996 land reform, the implementation of the same law and of the new law (approved in 2007) has accelerated and, in accordance with the government's discourse, the reform has achieved a new momentum. Relevant manifestations of the political will that now underpins the process are the achievements of the INRA in terms of quantity of land titled and the establishment of reasonably reliable land records. In terms of titled areas, in the first decade after the 1996 land reform less land has been titled than in the years 2006-2007 (namely in the decade 1996-2006 9.2 million hectares were titled, while in the years 2006-2007 10.4 million has were titled; INRA, 2008: 129). Furthermore, great efforts have been expended in order to improve the cadastral services and to keep the records updated (INRA, 2008: 125). These data, apart from demonstrating the new political will, are also suggesting an increase in tenure security for all the forests that are included in the titling program.

Another issue that the government is dealing with are the linkages of the land reform with rural development strategies. In the national development plan (Gobierno de Bolivia, 2006) the land reform process is nested in a array of initiatives aiming at rural development; these initiatives include extension activities such as loans at 0% interest in order to acquire production tools (especially machinery such as tractors) and inputs (such as seeds and fertilizers) and instruments specifically aiming at the achievement of food sovereignty (Gobierno de Bolivia, 2007b).

The Bolivian land reform has many features of the communitarian vision: this approach was already present in the 1996 formulation, it is further emphasised in the 2007 law and matches the traditional features of indigenous people of Bolivia. The multicultural and plural character of the country is recognised and traditional authority structures are acknowledged, can represent local communities in the land titling process and can eventually manage titled lands (Assies, 2006).

Overall, in Bolivia we find that the standard conditions for a successful land reform, within the agrarian paradigm, are (to a certain extent) addressed and that the approach that the Bolivian government is following falls squarely within the traditional approaches of the agrarian reform and communitarian land reform.

This way to frame land reform has implications with respect to forestry and the first is the thorough neglect of the forestry issue within land reform. This neglect is manifest already in the taxonomy used in the land reform legal documents where the land reform itself is called 'agrarian reform' (*reforma agraria*) and the main state organization in charge of the reform is called

‘National Institute for Agrarian Reform’ (*Instituto Nacional de Reforma Agraria*). In general, forestry issues are discussed very seldom in the documents of the ‘Agrarian reform’.

Furthermore, in one of the few statements from government sources on the land use of the territory that is being titled, the land vice-minister has admitted that of the 2.5 million hectares identified as state owned and hence available for redistribution up to 2006, almost all of it is forest but also that forest redistribution cannot solve the land problem in Bolivia. Also social movements engaged that the redistribution of land, when it is forest, is ‘just a show’; both parties evidently implying that forest areas are economically useless and are not of interest in the land reform process.<sup>10</sup>

During the current reform efforts in the process of writing the regulation of the new law of land reform approved in 2006, the Forestry Directorate (“Dirección Forestal”), which should be in charge of the promotion of forestry development, has been excluded on the basis that the law involves only the agrarian sector; a claim at odds with evidence that titles are demanded mostly on forests.

These facts are symptomatic of the general undervaluation of the issue of forestry in the process. Neglecting the forestry issue in the land reform process is all the more remarkable given the failure of the current policy framework to develop the potential of the forestry sector.

In addition to omissions measures that actually contradict the objective of sustainable forest management are in the policy framework. These contradictions, as mentioned above, occur every time policies and institutional arrangements favour land uses that are alternative to forest. All subsidies to agricultural and pastoral activities, when not coupled with similar incentives for the development of the forest-based economic activities, contribute to increase the opportunity cost of forest land. Given the neglect and lack of coordination of forestry and agrarian policies, the current interventions that unilaterally promote the development of the agrarian sector undermine the viability of forest management and promote land use change (see Chomitz and Buys, 2007).

Titling and clarifications of rights associated with land reform have a positive effect on forest tenure, but with respect to forest management the implications are complex because of the modalities in which titling is taking place. The Bolivian land reform, similarly to other reforms in Latin America, beginning with the Mexican one, is inspired by the ‘doctrine of social use’ according to which the sanctity of private property is subordinated to the social function of property (Ankersen and Ruppert, 2006). In Bolivia the doctrine of social use plays out in the provisions according to which land must satisfy ‘socio-economic functions’ and ‘unused’ land should be expropriated. In practice, given the fact that forest management is not economically viable in most cases, the most straight forward way to prove use is to deforest. This is a

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<sup>10</sup> See, [www.econoticiasbolivia.com/documentos/agricultura/evotierra2.html](http://www.econoticiasbolivia.com/documentos/agricultura/evotierra2.html) and “Ni revolución ni reforma agraria, sólo show” [www.econoticiasbolivia.com/documentos/agricultura/evotierra3.html](http://www.econoticiasbolivia.com/documentos/agricultura/evotierra3.html), both accessed on the 15th June 2009.

practice common in other land reforms throughout the continent and can explain how land reform and increased tenure security is often associated with deforestation (e.g. Southgate and Runge, 1990).

Also colonization programs that (explicitly or implicitly) promote the expansion of the agricultural frontier are in conflict with the objective of sustainable forest management and the abysmal record of state-sponsored colonization programs in the 1970s throughout Latin America is substantiated by evidence that they have been one of the main sources of 'state-led' deforestation (Rudel, 2007) and the episodes of colonization in Bolivia are also associated with high rates of deforestation (Kaimowitz *et al.*, 2002; Pacheco, 2006b). Now the government has a new colonization program (INRA, 2007) and has effectively started to put it in practice on the 11<sup>th</sup> of August 2009, by moving 400 men to Pando. The rightwing opposition and also social movements have argued that the ultimate goal of these settlements is to alter the electoral fortunes of the party of the president Morales in Pando rather than to improve the livelihoods of the people involved and the equitable use of land resources. Apart from these worries, doubts can be raised about the impact on forest of this initiative given the record of deforestation that characterised previous settlements programs and the forestry vocation of the area where these settlements are taking place.

## 7 CONCLUSIONS

To conclude, the land reform of Bolivia has actually many aspects of a forest tenure reform, but is not associated with instruments to face challenges and opportunities of titling forests. Past experiences of land reform failed because of missing proper enabling conditions, for the development of the rural economy and drawing a parallel to those experiences and in Bolivia these conditions include the development of the forestry sector. If the objective is also to give communal tenure (as it is happening with the titling of much indigenous territory), the conditions will include also provisions for communal resource management and for the building of coalitions and partnerships between communities and other actors in the sector. In general, it is necessary to broaden the land reform agenda and look for opportunities and synergies with the forestry sector. Neglecting forestry and not dealing with provisions in the land reform process that conflict with forest management might result in a failure of land reform. This failure would not be due to land reform per se, but to the omission of the forestry issues in the debate and the policy measures linked to the land reform. Analogies to earlier failures of land reform are difficult to escape. As land reform of agricultural lands cannot solve rural development problems without addressing agricultural issues, similarly successful land reform of forest land cannot elude forestry issues.

## References

- Alston, L. J., G. D. Libecap and B. Muellere (2000). "Land Reform Policies, the Sources of Violent Conflict, and Implications for Deforestation in the Brazilian Amazon." *Journal of Environmental Economics and Management* 39(2): 162-188.

- Ankersen, T. T. and T. Ruppert (2006). "Tierra y Libertad: The Social Function Doctrine and Land Reform in Latin America." *Tulane Environmental Law Journal* 19: 69-120.
- Assies, W. (2006). "Land tenure legislation in a pluri-cultural and multi-ethnic society: the case of Bolivia." *Journal of peasant studies* 33(4): 569-611.
- Balogh, B. (2002). "Scientific forestry and the roots of the modern American state: Gifford Pinchot's path to progressive reform." *Environmental History* 7(2): 198-225.
- Banerjee, A (1999): Land Reform: Prospects and Strategies, MIT Department of Economics Working Paper.
- Bernstein, H. (2002). "Land reform: Taking a long(er) view." *Journal of Agrarian Change* 2(4): 433-463.
- Berry, A and W. R. Cline (1979): *Agrarian Structure and Productivity in Developing Countries*. Baltimore, Johns Hopkins University Press.
- Binswanger, H. P. (1991). "Brazilian policies that encourage deforestation in the Amazon." *World Development* 19(7): 821-829.
- BOLFOR (2009). Dossier Forestal. Santa Cruz, BOLFOR.
- Borras, S. M. J. (2006). "Redistributive land reform in 'public' (forest) lands? Lessons from the Philippines and their implications for land reform theory and practice " *Progress in Development Studies* 6: 123-145
- Borras, S.M. (2003): Questioning Market-Led Agrarian Reform: Experiences from Brazil, Colombia and South Africa. *Journal of Agrarian Change* Vol 3 (3) pp. 367-394
- Borras, S.M. and T. McKinley (2006): The Unresolved Land Reform Debate: Beyond State-Led or Market-Led Models. International Poverty Centre, Policy Research Brief no.2
- Bromley, D. W. and M. M. Cernea (1989). The Management of Common Property Natural Resources: Some Conceptual and Operational Fallacies. World Bank. Washington, DC <http://dlc.dlib.indiana.edu/archive/00004977/>
- Bryden, J. and C. Geisler (2007). "Community-based land reform: Lessons from Scotland." *Land Use Policy* 24(1): 24-34.
- Büscher, B. and T. Mutimukuru (2007). "Buzzing too far? The ideological echo of global governance concepts on the local level: the case of the Mafungautsi Forest in Zimbabwe." *Development Southern Africa* 24(5): 649-664.
- Chomitz, K. M. and P. Buys (2007). At loggerheads?: agricultural expansion, poverty reduction, and environment in the tropical forests. *World Bank policy research report*. World Bank. Washington D.C.
- Dasgupta, A. and L. Pellegrini (2009). "The impact of Tenancy Reform in West Bengal: Evidence from the National Sample Survey." *The European Journal of Development Research* 21(2): 231-249.
- Dasgupta, P. (1993). *An inquiry into well-being and destitution*. Oxford, Oxford University Press.
- de Janvry, A. and L. Ground (1978). "Types and consequences of land reform in Latin America." *Latin American perspectives* 5(4): 90-112.
- de Janvry, A.(1981). *The Agrarian Question and Reformism in Latin America*. Baltimore, Johns Hopkins. University
- Deininger, K. (2003). *Land policies for growth and poverty reduction*. Washington, D.C.; Oxford and New York, World Bank; Oxford University Press.

- Deininger, K. and H. Binswanger (1999). "The Evolution of the World Bank's Land Policy: Principles, Experience, and Future Challenges." *World Bank Research Observer* 14(2): 247-76.
- Deininger, K., S. Jin and H.-K. Nagarajan (2007). Land reforms, poverty reduction, and economic growth: evidence from India. The World Bank, Policy Research Working Paper Series. Washington, D.C.
- FAO (2007). *State of the World's Forests 2007*. Rome, Food and Agriculture Organization (FAO).
- Futemma, C. and E. S. Brondízio (2003). "Land Reform and Land-Use Changes in the Lower Amazon: Implications for Agricultural Intensification." *Human Ecology* 31(3): 369-402.
- Gobierno de Bolivia (1994). Ley de Participación Popular. La Paz. Ley 1551.
- Gobierno de Bolivia (1996a). Ley del Servicio Nacional de Reforma Agraria. La Paz. Ley 1715.
- Gobierno de Bolivia (1996b). Ley Forestal. La Paz. Ley 1700.
- Gobierno de Bolivia (2006). Plan Nacional de Desarrollo. La Paz.
- Gobierno de Bolivia (2007a). Modificaciones a la Ley N°1715 de Reconducción Comunitaria de la Reforma Agraria. Ministerio de Desarrollo Rural, Agropecuario y Medio Ambiente, Viceministerio de Tierras and Instituto Nacional de Reforma Agraria. La Paz. Ley N° 3545.
- Gobierno de Bolivia (2007b). Plan de desarrollo sectorial - Revolución agraria y forestal. Ministerio de Desarrollo Rural, Agropecuario y Medio Ambiente. La Paz.
- Griffin K., A.R. Khan and A. Ickowitz, (2002), Poverty and the Distribution of Land, *Journal of Agrarian Studies*, 2 (3):279-330.
- Hardin, G. (1968). "Tragedy of the Commons." *Science* 162(3859): 1243-1248.
- Huizer, G (1999): Peasant Mobilization for Land Reform: Historical Case Studies and Theoretical Considerations. UNRISD, Geneva
- INRA (2007). Plan Estratégico Nacional de Distribución de Tierras y Asentamientos Humanos (PENDTAH). I. N. d. R. Agraria. La Paz.
- INRA (2008). Breve Historia del Reparto de Tierras en Bolivia. Instituto Nacional de Reforma Agraria. La Paz.
- Kaimowitz, D., P. Mendez, A. Puntodewo, *et al.* (2002). 'Spatial regression analysis of deforestation in Santa Cruz, Bolivia' in *Land Use and Deforestation in the Amazon*. C. H. Wood and R. Porro, University Press of Florida: 41-65.
- Kay, C. and M. Urioste (2007). 'Bolivia's unfinished agrarian reform: Rural poverty and development policies' in *Land, poverty and livelihoods in the era of globalization: perspectives from developing and transition countries*. A. H. Akram-Lodhi, S. M. Borras and C. Kay. London; New York, Routledge.
- Larson, A. M. and J. C. Ribot (2007). "The poverty of forestry policy: double standards on an uneven playing field." *Sustainability Science* 2(2): 189-204.
- Lippit, V.D. (1974): *Land Reform and Economic Development in China*. White Plains, NY, International Arts and Sciences
- Lipton, M (1977). Why Poor People Stay Poor: Urban Bias in World Development. London, Temple Smith
- Lipton, M (2009): Land Reform in Developing Countries: Property Rights and Property Wrongs. London and New York, Routledge
- Ostrom, E. (1990). Governing the Commons: The Evolution of Institutions for Collective Action. New York, Cambridge University Press.

- Pacheco, D. (2006a). Manejo Forestal Comercial Comunitario en Propiedades Colectivas Indígenas de las Tierras Tropicales de Bolivia. La Paz, Centro de Estudios para la Realidad Económica y Social, International Forestry Resources and Institutions.
- Pacheco, P. (2006b). "Agricultural expansion and deforestation in lowland Bolivia: the import substitution versus the structural adjustment model." *Land Use Policy* 23(3): 205-225.
- Pacheco, P., D. Barry, P. Cronkleton, *et al.* (2008). From agrarian to forest tenure reforms in Latin America: assessing the implications for local people and forests. Paper to the 12th Biennial Conference of the International Association for the Study of the Commons. Cheltenham, England.
- Pellegrini, L. (2009). Forest management in Bolivia, Honduras and Nicaragua: reform failures? Institute for Social Studies. The Hague.
- Raj, K. N. and P.K. Michael Tharakan (1983). Agrarian Reform in Kerala and its Impact on the Rural Economy, A Preliminary Assessment, in Ajit Kumar Ghose (ed), *Agrarian Reform in Contemporary Developing Countries*, Croom Helm and St.Martin's Press, London, NewYork
- Repetto, R. and M. Gillis, Eds. (1988). *Public Policies and the Misuse of Forest Resources* Cambridge, Cambridge University Press.
- Rojas, D., I. Martínez, W. Cordero, *et al.* (2003). Tasa de deforestación de Bolivia 1993-2000. Santa Cruz, Bolivia, BOLFOR, Superintendencia Forestal.
- Ros-Tonen, M. A. F., H. van den Hombergh and E. B. Zoomers, Eds. (2007). *Partnerships in sustainable forest resource management : learning from Latin America*. Leiden, Brill.
- Rudel, T. K. (2007). "Changing agents of deforestation: From state-initiated to enterprise driven processes, 1970-2000." *Land Use Policy* 24(1): 35-41.
- Shiva, V. (1993). "Monocultures of the Mind." *Trumpeter* 10(4): 2-11.
- Southgate, D. and C. F. Runge (1990). The institutional origins of deforestation in Latin America. *Staff paper*. University of Minnesota. St. Paul, MN
- Stanfield, J. David (1995): Insecurity of Land Tenure in Nicaragua. LTC Research Paper 120. Madison, University of Wisconsin
- Sunderlin, W., J. Hatcher and M. Liddle (2008). From Exclusion to Ownership? Challenges and Opportunities in Advancing Forest Tenure Reform. Rights and Resources Initiative. Washington DC.
- Thiesenhusen, W (1995): Broken Promises: Agrarian Reform and the Latin American Campesino. Westview Press, CO
- Unidad de Análisis de Políticas Económicas (2004). Sector Forestal 1990-2004. UDAPE. La Paz: 50.
- Wachholtz, R., J. L. Artola, R. Camargo, *et al.* (2006). *Avance de la deforestación mecanizada en Bolivia*. Santa Cruz, Bolivia, Superintendencia Forestal.
- White, A. and A. Martin (2002). Who Owns the World's Forests? Forest Tenure and Public Forests in Transition. Forest Trends and Center for International Environmental Law. Washington DC.
- World Bank (2008). Forests sourcebook : practical guidance for sustaining forests in development cooperation. Washington, DC, World Bank.
- Wunder, S. (2001). "Poverty alleviation and tropical forests: what scope for synergies?" *World Development* 29(11): 1817-1833.