Land degradation in Laos: materiality and discourses

Guillaume Lestrelin [a*]

[a] University of Durham, Durham, UK ; IRD, UR 176, Vientiane, Lao PDR

[*] Correspondence to: Guillaume Lestrelin

IRD, P.O. Box 5992

Vientiane, Lao PDR

Email: guillaume.lestrelin@durham.ac.uk

Tel: +856 20 59 39 443

Fax: + 856 21 41 29 93

Abstract

Building on recent debates related to environmental change and knowledge production, this paper examines the social construction and political outcomes of the current official discourse on land degradation in Laos. Despite a significant lack of empirical evidence, upland degradation is represented by the government and many of its development partners as a major and imminent threat to the development of the country. The paper argues that the development policy resulting from this particular perspective supports and legitimates the attempt of the lowland political elites to expand their control over upland resources and populations.

Keywords

Environmental discourse; development policy; Laos; political ecology; territorialisation; uplands

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Land degradation: facts and fiction

According to the Global Assessment of the Status of Human-induced Land Degradation (GLASOD), 65 percent of the world's land resources are degraded to some extent (OLDEMAN *et al.*, 1991). The most recent sequel of GLASOD, the Assessment of the Status of Human-induced Land Degradation in South and Southeast Asia, states that in Southeast Asia virtually all land is degraded with agriculture and deforestation as the two major causative factors (VAN LYNDEN and OLDEMAN, 1997). Drawing upon these two studies, the UNEP states that "land degradation problems [in Southeast Asia] are directly related to land-use practices, particularly agricultural expansion and intensification" (UNEP, 2002: 75) and the FAO considers that all the land resources of Laos are degraded with 84 percent of land at least moderately degraded (FAO, 2000).

Despite these authoritative sources, the exact extent, severity and causes of land degradation remain vigorously disputed. Many scholars argue that large scale assessments of land degradation lack appropriate methodologies to deal with the complexity of the issue. Land degradation is indeed strongly scale-sensitive and has multiple spatial and temporal dimensions depending on the biophysical, economic and cultural context in which it is defined (BROOKFIELD, 1999; FRESCO and KROONENBERG, 1992; WARREN, 2002). Therefore, measurements made at a particular scale may be contradicted by other measurements at different scales (GRAY, 1999). Furthermore, local perceptions and adaptations are also frequently undervalued in favour of simplistic models. For instance, often misled by aggregate, macro-scale data, much of the early literature related to poverty-environment interactions posited a

‘downward spiral’ of poverty and environmental degradation (SCHERR, 2000). In this neo-Malthusian model, population growth, limited access to land and lack of resources for conservation investments drive rural poor people to intensify their pressure on the environment. The resulting environmental degradation further limits natural resources availability and increases poverty.

One of the most famous examples of this kind of simplistic representations relates to what has come to be known as the ‘Theory of Himalayan Environmental Degradation’ (IVES and MESSERLI, 1989). Appearing during the 1970s (e.g. ECKHOLM, 1976; WORLD BANK, 1979), the Theory described increased sedimentation and flooding in the Ganges and Brahmaputra lowlands as the direct consequences of the Nepalese uplands’ extensive deforestation. Deforestation was presumed to result from rapid growth of the poor upland populations largely dependent on forest resources for their subsistence. It was then assumed that cleared land, steep slopes and heavy rainfall were causing increased runoff and soil erosion, resulting in land slides and catastrophic sediment discharge and floods in the lowlands. Fifteen years later, many empirical studies discredited the thesis by showing that rates of deforestation and erosion were not as serious as supposed and that many upland farmers had developed effective conservation technologies (e.g. IVES and MESSERLI, 1989; METZ, 1991; THOMPSON *et al.,* 1986). Since then, many micro-scale and longitudinal studies have reiterated this point in many different contexts (e.g. FORSYTH, 1996; MAZZUCATO and NIEMEIJER, 2001; RAVNBORG, 2003; TEMPLETON and SCHERR, 1999; TIFFEN and MORTIMORE, 1994; TIFFEN *et al.,* 1994).

In the final analysis, and this was one of the most resounding conclusions of the Himalayan controversy, land degradation assessments may well represent the narratives of particular actors rather than empirical realities (LEACH and MEARNS, 1996). In this regard, various scholars have demonstrated the role of simplistic environmental representations in shaping discourses that preclude local actors' knowledge and practices (e.g. ADGER *et al.,* 2001; BASSETT and ZUÉLI, 2000; FAIRHEAD and LEACH, 1995). For instance, looking at the deforestation issue in West Africa, LEACH and FAIRHEAD (2000) highlighted the persistence of a catastrophist discourse conveyed through authoritative international environmental assessments. Structured by accounts from the colonial period and using concepts derived from the early ecological science (e.g. climax vegetation, equilibrium or primary forest), this discourse represents the region as having experienced dramatic forest loss during the last century as a consequence of population growth and changing farming practices. Yet, as pointed out by the same authors, in many instances, this representation of the West African landscapes do not concur with empirical evidence and local perceptions.

Such discursive simplifications not only limit our understanding of the socio-environmental interactions, they also have important implications in terms of policy. Notably, a recurrent conclusion is that, if local populations are unable to preserve their environment, the responsibility for managing natural resources must be transferred to other actors – state agencies, local institutions organized/supervised by the state, or international organizations (e.g. BASSETT and ZUÉLI, 2000; FAIRHEAD and

LEACH, 1995; GOLDMAN, 2001). In fact, protection of the public interest and reduction of local, non-elite actors' control over their environment often go hand in hand. Hence, discourses on environmental degradation and its solutions can very well serve to legitimize and facilitate the territorialisation efforts of powerful actors.

We thus observe situations where some actors attempt to strengthen their political influence by being both producers and beneficiaries of a particular environmental discourse. For instance, ADGER *et al.* (2001) highlight the role of international organizations in, concurrently, producing assessments of so-called global environmental problems, advocating global environmental management as a solution and supporting/supervising international agreements and regulations. By defining the problems and suggesting solutions in which they play an essential role, international organizations are legitimizing their own existence and actions, even if the suggested "solutions do not necessarily reflect ecological realities of the human utilization of the environment" (ADGER *et al.,* 2001: 709). In fact, through the production of environmental knowledge, new categories of actors (e.g. international organizations, NGOs, indigenous movements, etc.) are able to 'infiltrate' political spaces usually dominated by the state. Hence, from a redefinition of the environmental conditions emerge new ecological rationalities and new solutions to environmental 'problems' which, in turn, require new regulatory regimes, new or restructured institutions and a reterritorialisation of the landscapes. As a result, the ways in which people interact with people and the environment are radically transformed.

Building on a review of official documents, national statistics, project reports and academic literature, this paper presents an analysis of the current environmental discourses in Laos and, in particular, of the way land degradation is represented as a major and imminent threat to the development of the country. In the first part of the article, I argue that the mainstream discourse is structured around two environmental representations. On the one hand, deforestation and land use pressure generate a 'chain of degradation' that stretches from soil erosion in the uplands to wetland sedimentation, floods and droughts in the lowlands. On the other hand, in the uplands, ecological fragility, rapid population growth and high levels of poverty force deforestation and unsustainable farming practices. It is then assumed that these two dynamics lead to a 'downward spiral' of increased poverty in the uplands and increased land degradation in the whole country. In the second part of the paper, I argue that, despite a clear lack of empirical evidence in support of this environmental discourse, the current development strategy in Laos is strongly influenced by the idea that the uplands are the 'epicentre' of land degradation and poverty in the country and that, as such, they require significant state intervention under the form of land zoning, land use regulation and population resettlement. Finally, I conclude by proposing an alternative reading of the story where the land degradation discourse and its advocated solutions are used to support the territorialisation effort of the current political elites of the country.

The 'chain of degradation' narrative in Laos

Since the late 1980s, the state of Laos has placed environmental preservation at the core of its rural development strategy. In general, the Laotian government and most of the

international development agencies with a presence in the country agree on the fact that Laos' development is threatened by a 'chain of degradation' stretching from deforestation to soil erosion and related downstream impacts. It is notably argued that forest clearing increases rainfall runoff which, in turn, fosters soil erosion. Increased runoff also alters hydrological regimes and increases the frequency and intensity of floods and droughts while, at the same time, eroded sediments accumulate in the streams and silt up wetlands and reservoirs. As presented by the Laotian authorities:

> "Lao PDR's abundant natural resources, especially water and forests, provide a strong foundation for national development. However, careful stewardship is needed to sustainably develop these resources. […] Rates of deforestation threaten to deplete many valuable forest resources over the next few decades. […] The major effects of deforestation include: increased rainfall runoff and flooding; reduction of underground aquifer recharging; soil erosion and the accompanying downstream siltation of rivers and wetlands; biodiversity losses due to habitats destruction; and climate change" (GoL, 1999: 19).

Similarly, for the United Nations:

> "Forest cover is believed to be declining rapidly due to land clearance for farming and shifting cultivation, illegal and unsustainable logging practices, fuel collection and forest fires. Deforestation and the loss of forest cover around villages lead to declines in soil fertility and increasing rates of soil erosion, in turn necessitating the clearance of more forest areas for production […] Declines in soil fertility, increases in the number of weeds, and increasing rates of soil erosion have reduced

agricultural productivity, whilst the continuing loss of forest cover has reduced the stability of water catchment areas, increasing surface runoff and the vulnerability of lowland areas to flooding and habitat destruction" (UN, 2000: 53-54).

In fact, this sequence of consecutive environmental degradation processes is commonplace in the official literature dealing with Laos' natural resources, either explicitly as in the two quotations above or more implicitly through ordered textual structures presenting the state of various resources (i.e. first forests, then land and water) along with their respective and interlinked threats (i.e. first deforestation, then soil erosion, siltation, floods and droughts) (e.g. ADB *et al.*, 2006; GoL, 1993, 2003; MRC, 2003; UNEP, 2001). Yet, many scholars call into question perspectives which link upstream and downstream processes in simplistic cause-and-effect models (e.g. BRUIJNZEEL, 2004; IVES and MESSERLI, 1989). In fact, little indisputable evidence is available regarding the extent and processes of land degradation in Laos and, thus, the prevailing environmental discourse appears largely based on a combination of assumptions coupled with, as we will see, economic exigencies and political desires.

- *Deforestation*

The core premise of the 'chain of degradation' narrative is that the forested areas of Laos are decreasing, from more than 70 percent of the country in the 1940s, to 64 percent in the 1960s and 47 percent at the end of the 1980s (UNEP, 2001; WORLD BANK *et al.*, 2001). Regarding more recent figures however, opinions are divided (Table 1). Officially, the current proportion of land covered by forests represents between 47 and 51 percent of the country – i.e. 110-120,000 of the 236,800 square

kilometres making up the country. In its State of the World's Forests, the FAO presents even more positive figures with a forest cover of 53.9 percent in 1995 (FAO, 1997). In contrast, the MRC estimates that forest cover has steadily decreased since 1989 to represent 40 percent of the territory in 1997 (MRC, 1997). Regarding annual deforestation rates, estimates also vary from one actor to another. Officially, some 70,000 to 220,000 hectares of forest are cleared every year (GoL, 1999). However, based on a comparative study of satellite imagery between 1993 and 1997, the MRC found a lower rate of 54,000 hectares per year (MRC, 1997). Four years later, the UNEP based its predictions on official figures from the 1980s to state that, with a deforestation rate of 300,000 hectares per year, "the country's last remaining forest areas will disappear over the next 38 years" (2001: 37).

- *Runoff and soil erosion*

The next link in the 'chain of degradation' narrative postulates that increased runoff and soil erosion are the results of deforestation and agricultural expansion (e.g. ADB, 2001; GoL, 1999, 2003; MRC, 2003; UNEP, 2001). At this stage however, with the exception of some statements based on the questionable GLASOD (see above), reports from governmental and international development agencies provide very little empirical evidence to document the processes and linkages involved. In fact, most of the agencies reporting on environmental change in Laos employ a form of double discourse. On the one hand, they acknowledge that data on land degradation and understanding of the processes are fairly limited. But on the other hand, they present the consequences of deforestation as self-evident threats. For instance, introducing key environmental issues,

the UNEP argues that: “land erosion due to high degree of slopes in Lao PDR gets compounded with deforestation in uplands” (2001: 4). However, regarding this particular process, it is later suggested that: “the lack of soil erosion data should provide an impetus for further research and monitoring” (2001: 52). Finally, after having described a series of issues running from deforestation to soil erosion, sedimentation, flooding and biodiversity reduction, they acknowledge that, in general, “data is limited, fragmented and generally of limited reliability” (2001: 77).

- *Sedimentation*

Similarly, regarding downstream sediment discharge, the next link in the chain, statements are both contradictory and uncertain. According to the UNEP, “a recent analysis of sedimentation data in the lower Mekong basin suggests that sediment rates in the southern parts of Lao PDR have increased substantially over the past twenty years. They are among the highest in the region, although the exact causes for the increase have not yet been determined” (2001: 52). Contrary to what is claimed though, these observations are not particularly recent since they rely on a report dating from October 1992 (HARDEN and SUNDBORG, 1992). By contrast, according to the MRC (2003), sediment levels have declined in the Mekong River since 1992 and the Commission argues that the concerns raised about the siltation of the Tonle Sap Great Lake in Cambodia are unjustified.

- *Floods and droughts*

Finally, summarizing the current situation regarding the impact of deforestation and agricultural expansion on hydrological regimes, the MRC states that "it is still unclear, however, how much impact land use changes have had on the hydrological regime of the Mekong. The removal of so much forest cover would be expected to result in changes in the rainfall-runoff relationship. […] However, no one has yet found any conclusive evidence in the 90 years of historical data for any significant changes" (2005: 6-7). In the end, contradictions and uncertainties contrast with the recurrent statements regarding the threats that deforestation and agricultural expansion represent for the development of Laos. Rather than relying on strong empirical evidence, the environmental discourse established in the official literature appears very much based on a set of assumptions regarding direct causal relationships between forest and land clearing, soil erosion, downstream sedimentation and hydrological regimes and, from here, to such social and economic issues as poverty, agricultural underproduction and food security (see Figure 1). To better understand this line of thinking, it is necessary to examine another major constituent of the environmental discourse, namely the place and role of the uplands in the land degradation 'issue'.

The upland 'issue'

- *Ecological fragility*

Due to their extent and the particular biophysical and socioeconomic context that characterizes them, the uplands represent a very specific issue for Laos' development actors. Upland areas are commonly estimated to represent 80 percent of the country and

a major part of the forested areas (GoL, 1992). Synonymous with important local variations in climate, soils and ecological milieus, the uplands also stand for a 'hot spot' of the country's biological diversity (CHAMBERLAIN, 2003; DOUANGSAVANH *et al.*, 2003). However, because they combine steep slopes with poor soils, the uplands are considered as being more ecologically fragile and notably more prone to soil erosion than any other area of the country (FAO, 2000). This perspective is further solidified by the 'chain of degradation' narrative. Indeed, despite numerous uncertainties, downstream wetland and reservoirs' siltation as well as water shortages and floods are often cited as the main consequences of upland runoff and soil erosion. Hence, in some measure, the uplands' ecological fragility makes the lowlands vulnerable.

- *Poverty*

From a socioeconomic perspective, the Laotian uplands are generally characterized by a poor development of the infrastructures of exchange, very limited market integration and the predominance of subsistence economy based on farming activities. While the statistics currently available at the national scale does not allow a differentiation of upland and lowland populations, it is commonly estimated that the uplands are sparsely populated, essentially by ethnic minorities living in poverty. Poverty appears as a critical issue here, since, according to some studies, poor households exceed 70 percent of the total population in some northern, mountainous provinces (ANDERSSON *et al.*, 2006). Reports from governmental agencies and international organizations describe the situation as follows:

> "In the mountainous upland areas, subsistence agriculture and acute rural poverty predominate" (GoL, 1999: 3).

> "The poorest districts in Lao PDR are characterized by very sloped land, relatively low population density, and – particularly in the South – by ethnic minorities" (WORLD BANK, 2006: 75).

Among national and international development actors, inaccessibility is commonly considered as a key explanatory factor of poverty. With very limited access to agricultural technology, credit and education, upland populations are considered as trapped in poverty (e.g. ANDERSSON *et al.*, 2006; GoL, 2003; UNDP, 2002). More importantly, because of their geographical isolation, upland peoples are cast aside from the market and its promises. Consequently, they are seen as having no other alternative than to rely strongly on their environment, at the risk of degrading it. What is particularly striking in this narrative is the degree to which subsistence economy is given a negative meaning. In some reports, 'subsistence' is even translated by 'survival':

> "Many communities in these [poor] districts are small and remote, with limited access to roads and markets and improved water supply and sanitation, and a high reliance on natural resources for their *survival*" (WORLD BANK, 2006: 75, emphasis added).

This perspective denotes what RIGG (2005) describes as the 'creation of a new poverty' in Laos. Indeed, be that for rigidly economistic international lenders such as the World Bank, the ADB or the IMF or for a former communist state recently converted to the

free market ideology, the subsistence economy is a prime cause of poverty and therefore an ill to be eradicated through development propelled by market integration.

- *A 'downward spiral'*

From these particularities – i.e. rich but fragile ecosystems, inaccessibility, subsistence economy, high levels of poverty and ethnic minorities – emerge very specific development stakes for the Laotian state and its development partners in terms of environmental conservation, economic development, poverty reduction and national integration. Through three major themes, all these issues underlie the discourses related to the role of the uplands in the land degradation 'issue' (Figure 2). A first theme relates to the country's rapid population growth and its potential consequences in terms of pressure on upland natural resources. Overall, with a density of just 24 inhabitants per square kilometre, and even if the population continues to increase by 2.8 percent per year (UNESCAP, 2004), demographic pressure does not appear as an immediate major threat for the environment. Nevertheless, many development agencies argue that, if only the 'potential arable land' is considered, the net population density may reach critical values in some areas – up to 465 inhabitants per square kilometre according to the MRC (2003) – and lead to significant pressure and ensuing environmental degradation. For instance, using slope and soil characteristics to delimit land use suitability classes, the Ministry of Agriculture and Forestry estimates that only 32 percent of the national territory is actually suitable for agricultural purposes and recommends conservation measures and forestry in the remaining area (GoL, 1999).

Beyond land scarcity, a large part of the debate on the Laotian uplands crystallizes around the 'population growth–shifting cultivation' issue (Figure 3). While there is some dispute over the exact figures, some 300,000 households (GOUDINEAU, 1997), or one third of Laos' total population (UNDP, 2002), probably engage to some extent in shifting cultivation. The practice is essentially concentrated in the uplands with approximately 70 percent of the fields located on land with slopes greater than 20 percent (FAO, 2001). As pointed out by RIGG (2005), the debate over shifting cultivation can be reduced to two antagonistic discourses. A first one, supported by scholars such as CHAMBERLAIN (2003), FOX (2000) and RAINTREE (2003), considers the practice as productive, sustainable and well adapted to the Laotian upland context. For these authors, shifting cultivation is made unsustainable by inappropriate land policies.

By contrast, the official discourse considers that, in the present demographic conditions, shifting cultivation is both environmentally destructive and poverty-creating[i]. As argued by the Laotian authorities, "most sustained severe deforestation and land degradation in Lao PDR is associated with shifting cultivation" (GoL, 2000: 6). Furthermore, "with increasing population densities in the upland areas, the present farming systems [shifting cultivation] inevitably condemn upland rural people to continued poverty" (GoL, 1999: 4). And such a dark picture is not the preserve of the government (e.g. UN, 2000; UNEP, 2001).

Thus, a common view of the Laotian government and a number of international development actors is that shifting cultivation does not deliver sufficient output for the upland populations to improve their living conditions and move away from poverty. As an unproductive farming system practiced by a majority of upland-dwellers, it contributes to the structural poverty of the uplands. Furthermore, associated with population growth, shifting cultivation engenders land degradation which, in turn, undermines farming activities and exacerbates poverty. Subsequently, poverty may drive upland populations to intensify further their pressure on environmental resources in order to maintain a decent living. The picture represents thus upland-dwellers as trapped in a 'downward spiral' – what BLAIKIE (1985) portrayed as the 'desperate ecocide' of the poor – that pushes them inexorably towards more poverty and environmental degradation.

Further down the line, the 'downward spiral' is also represented as a threat to lowland populations' well-being and, more generally, to the national economy. Following the 'chain of degradation' narrative, siltation of wetlands and reservoirs, water shortages and floods are often considered by the Laotian authorities and a number of their development partners as the main consequences of an 'improper' management of the uplands (e.g. GoL, 2003; MRC, 2003). The chain of physical explanation is thus extended into a chain of economic and social impacts which represents upland shifting cultivation as threatening two major sources of revenue for the country, namely lowland agriculture and hydropower generation[ii]. In other words, upland degradation in Laos is

considered as a significant threat not just to the livelihoods and prosperity of the hill people, but to that of the whole nation.

This perspective has significant consequences in terms of policy-making and, as will be discussed in the following sections, we can see the assumptions about the upland 'issue' resulting, for example, in the government's land and settlement policies, in its approach to agricultural development, in the measures taken to build a national identity and the place of upland minorities in that identity, and in the way that the 'chain of degradation' becomes cast as a national problem.

Territorialisation

As a result of the official perspective on land degradation, the uplands of Laos have become privileged targets for various conservation measures undertaken through land classification and land use regulation. What was formerly considered as a homogeneous space of mountains and forests has thus been redefined into various 'eco-zones' largely inspired by Laos' new development partners, each one with its particular set of resources, users and regulations (GOLDMAN, 2001).

- *Land zoning*

As a starting point for this policy, following the resolutions of the first national forestry conference held in 1989, the Tropical Forestry Action Plan emphasized the need to control deforestation in the country and recommended the implementation of forest conservation and tree plantation measures over an area of 170,000 square kilometres

(i.e. 70 percent of the country)[iii]. A few years later, in 1993, the Laotian state established a national protected area system of eighteen National Forest Reserves (*pa sanguan hengxat*) covering 28,200 square kilometres. These reserves were later renamed National Biodiversity Conservation Areas (NBCAs) – a concept promoted by the World Bank and major international conservation NGOs – and further expanded to twenty areas, accounting for some 30,000 square kilometres or 12.5 percent of the country[iv]. Looking at their spatial distribution within the country, it is clear that NBCAs are largely aimed at conserving upland ecosystems (Figure 4).

At the same time that the National Forest Reserves were created, the Prime Minister's decree No. 169 established a land zoning system to be implemented at the village scale. This policy classifies village land into five categories:

- 'Protection forest' (*pa ponkan*) where human activities are prohibited for the purpose of preventing soil erosion and associated natural disasters as well as protecting water sources and national defence areas,
- 'Conservation forest' (*pa sanguan*) where human activities are prohibited for the purpose of preserving fauna, flora, biodiversity and areas of cultural, educational or scientific interest,
- 'Regeneration forest' (*pa feunfu*) which is reserved for natural reforestation or plantation by local populations,
- 'Production forest' (*pa somsay*) where limited logging and collection of forest products are permitted,

- ‘Degraded forest’ (*pa xutsom*) which can be allocated to households for agricultural activities, livestock farming or tree plantation. Shifting cultivation is tolerated with fallow periods no longer than three years.

Through the Land Use Planning and Land Allocation program (LUPLA) notably, this classification has become the main instrument of an ‘area-based’ approach to development in Laos (RIGG, 2005). This program constitutes one of the main elements of the government strategy related to rural development and natural resource management. In its early form, the program consisted of a simple Land Use Planning agreement between village authorities, organized in a committee for the occasion, and the national authority represented by the District Agriculture and Forestry Office (DAFO) and other district financial and planning officers. The agreement determined the boundaries of the land available for agrarian purposes, with the remaining land defined by default as forest. After 1993, with the Prime Minister’s decree No. 169, these ‘forests areas’ were further subdivided according to the official forest classification. Agricultural land distribution within the village community – the actual land allocation process – remained with the local authorities who were instructed to limit each household to three plots. This simple restriction, to which was later added a rule limiting the fallow period to three years, was designed to reduce cropping rotations and, in line with the rural development objectives, make shifting cultivation no longer viable. The process became gradually more elaborate and now involves the mapping and zoning of the village land according to slope gradients and forest types and the allocation of agricultural plots to households according to their labour availability.

Officially, the land allocation criteria includes a limit of 22 hectares per active individual, of which a maximum of 1 hectare is permitted for upland rice, 15 hectares of pastureland, 3 hectares of cash crops and 3 hectares of orchards. The lowland paddy fields are not considered in the allocation process and, therefore, remain with their owners. While these rules appear relatively favourable to farming activities, the land allocation is in fact largely conditioned by the total surface area classified as agricultural land during the land use planning process. Yet, it seems rather doubtful that any village in Laos would be able to allocate the maximum 22 hectares of land to any of its residents without penalizing the rest of the community. Indeed, between 1995 and 2004, around 90 percent of the area considered by the LUPLA has been classified as forested land on which agricultural activities are banned (GoL, 2005). According to AUBERTIN (2003), from the first experimentations of the land reform in the early 1990s until 2003, one third of Laos has been classified as 'protection' or 'conservation' forests. Actually, a large number of studies, including state-sponsored assessments, agree on that fact that the LUPLA comes generally with a drastic reduction of the agricultural land available per capita (e.g. EVRARD, 2004; NAFRI and LSUAFRP, 2002).

While its official scope is national, the LUPLA seems very much focused on resolving the upland 'issue'. Among the eight objectives of the program, five are specifically oriented towards the upland context: i.e. to eradicate shifting cultivation, to intensify and diversify upland agriculture, to preserve forests and watersheds, to preserve biodiversity, and to improve the living conditions of the upland populations by the

adoption of a sedentary lifestyle (EVRARD, 2004). Revealingly, the first experimentations of the LUPLA in the early 1990s were all conducted in upland environments in Luang Prabang and Sayaboury provinces. Even the international assistance reflects this strategy since, following the example of the Lao-Swedish Shifting Cultivation Research Sub-program in charge of the experimentation of the LUPLA in Luang Prabang province, many of the internationally-funded projects involved in supporting land reform are 'specialized' in the shifting cultivation issue.

In fact, land reform appears to have quite different purposes depending whether it is undertaken in the lowlands or in the uplands. The official statistics show that, by 2005, the LUPLA had been implemented in some 7,130 lowland and upland villages, representing approximately 440,000 households (GoL, 2005). However, in many upland villages, the process has only consisted of land use planning without land allocation (EVRARD, 2004). In contrast with the lowlands where the focus is on the establishment of secure land rights (allowing notably the development of a land market), in the uplands, the primary objective of the land reform is the stabilization of shifting agriculture in order to avoid environmental degradation. Therefore, the top priority for the uplands is not land allocation, but rather land use zoning and the implementation of environmental regulations (DUCOURTIEUX *et al.*, 2004).

Regarding its socioeconomic impact, after more than two decades of implementation and despite being officially aimed at improving the living conditions of the upland-dwelling communities, studies have shown that land reform is often a cause of increased

poverty, marginalization and uncontrolled migration (e.g. DUCOURTIEUX *et al.*, 2005; EVRARD, 2004; LESTRELIN and GIORDANO, 2007; MOIZO, 2006; VANDERGEEST, 2003). In fact, it would seem that the pessimistic conclusions of this growing number of studies are increasingly taken into account by the Laotian authorities. Notably, in the recently published National Growth and Poverty Eradication Strategy, the Laotian government calls for a reassessment of the LUPLA, considered as a potential source of hardship in the uplands (GoL, 2003).

- *Resettlement*

Alongside the LUPLA, the resettlement policy represents another major instrument of Laos' area-based development strategy. While this policy was not officially formulated until the end of the 1990s, ever since the creation of the Lao People's Democratic Republic in 1975, a major effort of the Laotian government has been to relocate remote populations "nearer to the nerve centres of development to benefit from rural development policies" (EVRARD and GOUDINEAU, 2004: 944). The strategy was finally formalized in 1998 with the introduction of the Focal Site approach in the National Rural Development Programme. Similarly to the LUPLA, while the policy is not specifically directed towards the upland communities, the criteria used to select the Focal Sites – notably those related to 'ethnic minorities living in isolation and poverty' and 'the need to stop shifting cultivation and consolidate villages' - have lead to this outcome (UNDP, 2002).

In line with the government's perception of the upland 'issue', the logic of the Focal Site approach is to create development centres where state services and improved access to markets are provided to upland remote populations in order to help them escape endemic poverty by integrating into the national (market-oriented) economy. However, partly due to a lack of enforcement capacity, service provision and improved access to markets have in fact essentially meant relocation of highland remote populations along roadsides, river bottoms and other more accessible areas (GOUDINEAU, 1997; RIGG, 2005). In 1998, the Laotian government announced its plan to create eighty seven Focal Sites by 2002. These sites would be the recipient for 1,200 villages and 450,000 people (twelve percent of the country's rural population), half of whom would come from displaced communities.

At the country level, the results of the internal resettlement programme have been substantial both in terms of population movement and impacts on these populations. According to a UNDP study, between 1993 and 1996, approximately one third of all highland villages in six mountainous provinces had been displaced (GOUDINEAU, 1997). So far, while there have certainly been success stories, notably in the cases where the resettlements benefited from a strong local leadership, an effective participation of the populations and sufficient land resources in the relocation areas (RIGG, 2005), a large number of studies reported dramatic consequences, including increased rice shortage, chronic indebtedness, increased mortality, loss of cultural identity and uncontrolled migration (e.g. BAIRD and SHOEMAKER, 2005; EVRARD and GOUDINEAU, 2004; JONES *et al.*, 2005; ROMAGNY and DAVIAU, 2003).

- *A lowland-upland dichotomy*

Through their objectives and implementation, both the LUPLA and the resettlement policy highlight a lowland-upland dichotomy operated by the Laotian authorities. One of the most significant examples of this perspective can be found in the Government Strategic Vision for the Agricultural Sector published in 1999. Indeed, the entire document is based on what is described as "the dual rural economies" of the country which call for "separate development strategies" (GoL, 1999: 3). According to the authors, in the Mekong plain, the population benefit from environmental conditions favourable to productive agricultural activities as well as a good access to exchange infrastructures, credit, information and technologies. Markets are seen as 'working properly', providing lowland-dwellers with sufficient livelihood opportunities and incomes. Accordingly, the government policy should seek to support farming diversification, agricultural intensification and market integration.

In contrast, the uplands are described almost as the complete opposite: poor road network, very limited access to technologies, information and credit, little incentive to entrepreneurship and, more importantly, a fragile environment. In terms of farming systems, the superiority of lowland, rain-fed or irrigated agriculture versus upland shifting cultivation is considered as an incontestable fact. The first is represented as productive and environmentally sustainable while the second is defined as a "low input – low output" activity and an aberration for the achievement of sustainable rural development (GoL, 1999: 4). In this context, environmental conservation must be

integrated with economic development. Accordingly, five main strategic priorities are identified for the uplands:

1. Land zoning for forest and biodiversity conservation,
2. Allocation of land use titles to create incentives for conservation measures,
3. Development of community-based and sustainable land use management systems aimed at soil erosion control, reforestation and biodiversity conservation,
4. Farming systems' diversification and development of small-scale irrigated agriculture for alleviating poverty,
5. Improvement/extension of the road network and improved access to credit and information in order to facilitate market integration (GoL, 1999: 36-37).

Thus, superimposed on the standard urban-rural differentiation, the lowland-upland dichotomy creates a subdivision of the country into three distinct spaces which correspond to a tri-dimensional, horizontal and vertical, gradient of development: from the modern cities in the plains to the developing rural lowlands and the underdeveloped mountainous areas. In the latter, apparently driven by the state and international development agencies' concerns for land degradation and poverty, a joint territorialisation-deterritorialisation process is under way. Through this process, the uplands are delimited and classified into various rationalized zones according to slope, ecological function and integrity. Then, according to criteria related to economic productivity, upland-dwelling households are allocated land for determined, yet temporary uses. At the same time, remote communities are prompted to leave their traditional lands and to gather in resettlement areas designated by the state. In effect,

through a scientific approach and legal instruments largely designed to deal with the upland ‘issue’, policy-makers are extracting upland communities from their territory, restructuring their modes of access to local resources and, more generally, taking control of the uplands.

The hidden transcript

- *Modern lowlands, backward uplands*

As discussed above, official references to the contrast between ‘modern lowlands’ and ‘underdeveloped uplands’ are recurrent. However, this line of thinking appears to go beyond simple technical or economic considerations. Going into further detail, there seems to be a coexistence of two explanatory discourses: an official and politically-correct one which explains the ‘underdevelopment’ of the uplands by their remoteness and difficult ecological conditions, and another, more informal and condescending, which denounces upland-dwelling minorities and their archaic traditions. Indeed, what is implicit in a number of governmental reports is that upland populations are practicing an environmentally-destructive agriculture 'with no regard for the good common sense'. From this perspective, upland populations are sometimes denounced as ‘dangerously backward and ignorant’ (AUBERTIN, 2001). For instance, a UNDP study of the Sayaboury province quotes a speech of the Chairman of the National Rural Development Committee where this point of view appears rather explicitly. Rural areas are described as “areas which are isolated, remote and uncivilized, in which the ways of living of people are different from others, and in which there are high natural and

political risks" and where populations are "poor and backward" (UNDP, 1996 quoted in RIGG, 2005: 87).

Such considerations also filter through the national ethnic classification. The first official classification adopted after 1975 identified some 68 minorities, gathered into three groups according to residence patterns: 'lowland Lao' (*Lao loum*) which corresponds to the Lao-Tai ethnolinguistic group, 'midland Lao' (*Lao theung*) which is supposed to encompass all the Austro-Asiatic minorities and 'highland Lao' (*Lao soung*) which corresponds indifferently to Hmong-Yao and Tibeto-Birman minorities. This classification had been imagined to support political objectives and, notably, an attempt to build a sense of national identity (GOUDINEAU, 2000; JERNDAL and RIGG, 1998). Indeed, behind the subdivision is the idea that, whatever the communities considered, they are all Lao. While the total number of ethnic minorities was reassessed on several occasions, the topographically-based trinity lasted and gradually became the main instrument of ethnic identification and differentiation for both the Laotian authorities and the people itself.

Despite the aims, the practical applications of this ethnic classification are not without a certain amount of evolutionism. For instance, when the Lao Front for National Construction adapts its policy on ethnic minorities, local practices and beliefs are classified as 'good' or 'bad' in the light of their compatibility with the 'national' model of modernity (GOUDINEAU, 2000). Yet, as Kaysone Phomvihane[v] advocated in his 1981 discourse on the country's ethnic issue, the construction of the national identity is

to be essentially based on the Lao language and Lao-Tai cultural norms (EVANS, 1999). Thus, in general, most of the practices identified as ‘backward’ by the Laotian state are those of the 'midland Lao' and 'highland Lao': shifting cultivation of course, but also opium cultivation, non-Buddhist beliefs or blood sacrifice. One of the consequences of this situation is that a sense of superiority has emerged among the 'lowland Lao' who often consider the ethnic minorities as economically and culturally backward populations (STUART-FOX, 2005). Nowadays in Laos, it is not uncommon to find young city-dwellers denying their ethnic identity and claiming to be 'lowland Lao' in order not to be considered as ‘*khon ban nok*’ – which translates literally as ‘people of the countryside’ but has a more pejorative meaning close to ‘country bumpkin’.

- *Upland resources and ethnicity*

The negative outcomes of Laotian rural development policy – land regulation and resettlement in particular – have led various authors to suspect a hidden agenda of the state, including a takeover of the lucrative forest resources (IRESON and IRESON, 1991) and, through the territorialisation process described above, a strengthening of the financial, political and ideological control of remote populations and ethnic minorities with cultures considered too different from the national model of modernity (BAIRD and SHOEMAKER, 2005). Even the investment of the Laotian authorities in education seems to be partly directed towards these objectives since, as GOUDINEAU describes, “ethnic education includes the pervasive political message that minorities should understand and accept utilization of the uplands’ resources (particularly, forests and

hydroelectricity) by the state" (2000: 26, author's translation)[vi]. However, when considering the place of the minorities in the political life of the country, these political processes can also be put in ethnic terms.

As described by RIGG, "minorities are thinly represented in government, have significantly worse health and education profiles than the Lao, and are *de facto* if not *de jure* socially, politically and economically excluded" (2005: 67). During the early years of the socialist revolution (1945-1975), the official policy of the LPRP was to promote the participation of ethnic minorities in the political life of the country. Many non-ethnic Lao were offered positions within the political and administrative institutions of the territory controlled by the revolutionary forces. However, in the long term, the policy never really succeeded to strike a balance in the upper echelons of the political system. After 1975 and the creation of the Lao People's Democratic Republic, this tendency reversed and the new recruits of the Party were essentially composed of 'lowland Lao', often more educated and, for that reason, considered more capable of governing the country. In fact, members of minority groups also lacked the social links with powerful, predominantly ethnic Lao, political and economic elites required for gaining access to influential positions. As a consequence, the prominence of minorities in the organs of power decreased rapidly and the dominant institutions of the country, the Party and the Army, are now largely in the hands of 'lowland Lao' (STUART-FOX, 2005).

One of the consequences of this unbalance of power is that the 'lowland Lao' are in a position to manipulate the environmental discourse in order to expand their political influence to the most marginal areas of the country. In this respect, land degradation assessments (such as those mentioned above) and the ‘chain of degradation’ narrative provide ideal grounds for the 'lowland Lao' leadership to expand its control over the upland territory, in the guise of development interventions. If deforestation and agriculture are responsible for such a critical level of land degradation, the upland minorities living in forested areas and practicing shifting cultivation are to be blamed and controlled. Presented as solutions to the upland 'issue', land zoning, land use regulation and resettlement legitimize and facilitate the territorialisation process whereby the Laotian state – and indirectly the 'lowland Lao' political elites – attempts to control the upland resources and the peoples who use them. But in the end, the idea that uncontrolled population growth and unsustainable agricultural practices are in danger of exceeding the ecological capacity of the uplands, threatening not only the country’s most valuable resources but also the prosperity of the lowland populations, may well constitute more a ‘lowland myth’ than a reality.

- *A coalition of powerful actors*

A first element explaining the convergence of discourse between the Laotian government and international development agencies probably relates to the long-term involvement of the latter in the promotion, funding and codification of environmental policy and regulations. Indeed, in 1986, the government introduced a set of reforms toward a market-oriented economy. Envisioned as a solution to a collapsing domestic

economy, the New Economic Mechanism (*chintanakan mai*) was also a response to pressure from Laos' main creditors, the World Bank and the Asian Development Bank. Subsequently, in order to facilitate the policy shift, international donors and development agencies began involvement in the codification of numerous decrees and laws relating to property rights and natural resource management (GOLDMAN, 2001). It is likely that, during this process, international agencies' consultants have been disseminating - perhaps even lobbying for - particular environmental representations.

Beside simple political manoeuvres, government and international agencies' discourses probably converge because of the respective interests that the two sets of actors have in maintaining a fruitful collaboration. While it would be rather cynical to argue that the only beneficiary of the foreign aid is the Laotian political leadership, the latter has undeniable interests in maintaining the presence and activities of international development agencies. Indeed, foreign aid represents half of public expenditure (DGCD, 2002; UNDP, 2002) and development projects funded and managed by international agencies are often a good way for the government to prove its commitment to the well-being of the people. Beyond this concern for public image, the presence of international agencies also encourages foreign private investment which, after the economic reforms of 1986, has become a significant source of revenue for the political elite of the country, either through the exercise of corruption or because they or their families and allies are also part of the economic elite and provide services to foreign entrepreneurs (STUART-FOX, 1996, 2006).

Bearing in mind Laos' dependence on foreign aid, what may appear more surprising is that a number of international development agencies are supporting rather uncritically the implementation of some of the state's policies, despite the evidence of their negative impact on upland minorities' livelihoods. However, it seems that the most important objective for a number of aid workers is not so much to preserve the public image of their agency, but rather to maintain a presence in the country, to have programs running, so that the money can continue to flow into the system and salaries can be paid to expatriates and local staff (BAIRD and SHOEMAKER, 2005). And in the particular case of Laos, there are long term perspectives to this strategy. As GUÉGUAN points out, "Laos is an ideal country for the so-called 'development NGOs': Laotian non-governmental organisations being prohibited by the government, the international NGOs cannot 'pass on the torch' to local actors as they usually do in other countries. Therefore, they can justify their presence indefinitely" (2005, author's translation)[vii].

To some extent, therefore, the relationship between the government and its international development partners is more than a bilateral agreement but can be compared to a 'coalition' of powerful actors, gathered by converging interests. Yet, as mentioned above, such a 'coalition' does not necessarily benefit the development of the country as a whole and may even be to the detriment of a significant part of the population.

Discussion and Conclusions

Clearly, there are various and diverging voices behind what is termed 'the state', 'ethnic minorities' or 'international development agencies'. However, the simplification is useful

in approaching the prevailing discourse related to land degradation in Laos, the assumptions and the power relations that shape this discourse, and their consequences in terms of policy-making. What appears clearly from the analysis is that, similarly to what has been described elsewhere in the region (e.g. BUCH-HANSEN, 2003; VANDERGEEST, 1996; VANDERGEEST and PELUSO, 1995), an important process of territorialisation is occurring in Laos. Here, behind the official discourse on land degradation and the national objectives of environmental preservation, socioeconomic development and nation-building, a number of political instruments (i.e. land use planning, land allocation, resettlement and topographically-based ethnic classification) reflect the effort of the state for assigning the 'right place' to the people and their activities, and, to some extent, the attempt of lowland political elites to gain control over upland resources and populations.

Many international development agencies in Laos are facilitating this process, either directly by providing financial and/or technical support to national policies, or more indirectly by sponsoring and disseminating environmental assessments that legitimize the state territorialisation process. However, just as it was the case for the 'Theory of Himalayan Environmental Degradation' (see above), there is a real need for researchers to deepen the analysis of the land degradation processes and status in Laos. First, the general lack of empirical data casts some doubts on the dependability of the current official discourse on environmental change. Second, the resilience of some simplistic discourses requires that they be exposed to a number of counterarguments before being reassessed. Indeed, in the Himalayan case, if the academic response to studies that put

into question the Theory has generally been positive, their impact on environmental policy-making has remained rather limited (BLAIKIE and MULDAVIN, 2004; IVES, 2004). In fact, the temptation to link poverty and environmental degradation is still recurrent in many international organizations' approaches to population-environment interactions (e.g. DASGUPTA *et al.*, 2005; DURNING, 1989; UNEP, 1995; WCED, 1987; WORLD BANK, 1992, 2006).

Further down the line, more research is also needed with regard to the long-term socioeconomic impacts of the state territorialisation process. In the uplands of Laos, despite limited market integration and low levels of urbanisation and industrialisation, environmental discourses and their political outcomes are driving significant livelihood change (LESTRELIN and GIORDANO, 2007). These changes include a development of non-farm activities, a shift from subsistence to market-oriented economy, a re-organisation of social structures and, for some, migration towards urban areas. There is a need to better understand the ways these marginal areas are drawn into a process of agrarian transition that may be defined as 'policy-induced'.

As noted earlier, the description of the official discourse on land degradation in Laos may give the false impression that the case is closed, the causative factors known and the solutions identified. However, in recent years, the strategy advocated by the government for resolving the 'issue' has changed towards a more 'people-centered' approach and, notably, more local participation and less constraints on local livelihoods. Borrowing the terminology from ADGER *et al.* (2001), the approach has evolved from

a ‘managerial and neo-Malthusian’ perspective – which describes upland-dwellers as forced to degrade their environment due to unsustainable population densities and advocates the diffusion of technological solutions – to a more ‘populist’ viewpoint – which present upland populations as the (unfortunate) victims of a lack of land tenure security, education and economic opportunities, and suggests education and improved access to land as the main solutions.

While the fundamentals of the upland ‘issue’ have not been directly contested, there is an important paradigm shift regarding the potential solutions to land degradation and poverty in the uplands. So far, this shift remains essentially discursive and has not engendered any major change in rural development policy. Notably, LUPLA and resettlement still constitute the main instruments of the Laotian authorities for ‘developing’ the uplands and, thus, continue to be applied throughout the country. However, there are some prospects for a development policy that does not use constraint and coercion to drive livelihood change among upland populations but, instead, attempts to provide these populations with more livelihood opportunities.

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Tables and Illustrations

Table 1: Estimates of forest cover and deforestation rates in Laos

Year	Forest cover		Deforestation rate (km sq./year)	Sources
	km sq.	% of Laos		
1940	160,000	70%	-	WORLD BANK *et al.* 2001; UNEP 2001
1960	151,500	64%	-	WORLD BANK *et al.* 2001; UNEP 2001
1989	110,000	47%	-	WORLD BANK *et al.* 2001; UNEP 2001
1994	110,000	47%	700 – 2,200	GoL 1999
1995	124,350	53.9%	1,480	FAO 1997
1997	93,898	39.7%	540	MRC 1997
2001	116,000	49%	3,000	UNEP 2001

Figure 1: The ‘chain of degradation’ narrative and its limitations

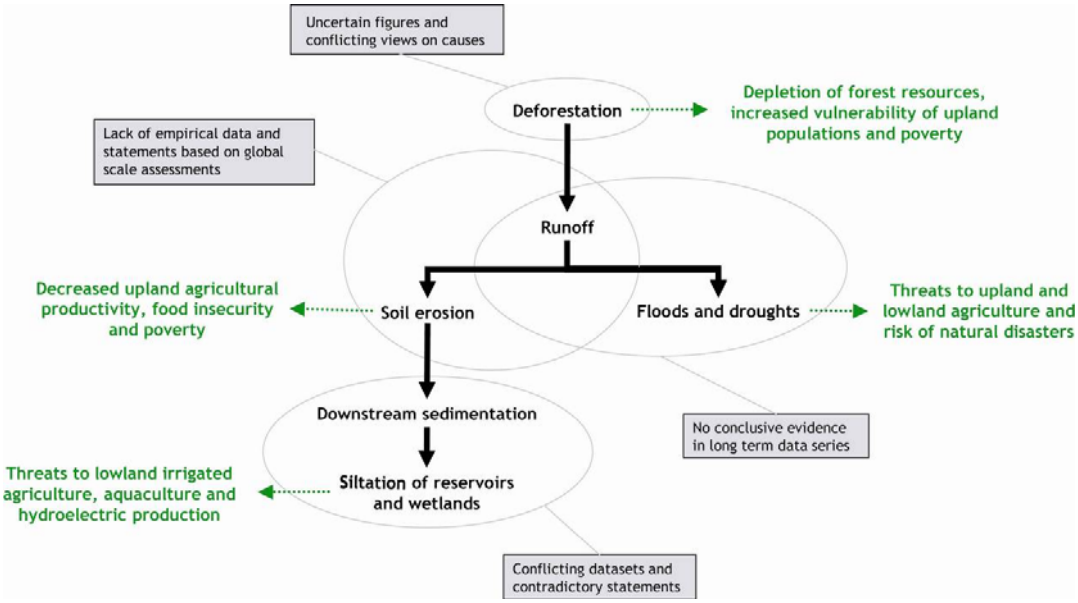


Figure 2: The thematic structure of the upland ‘issue’ in Laos

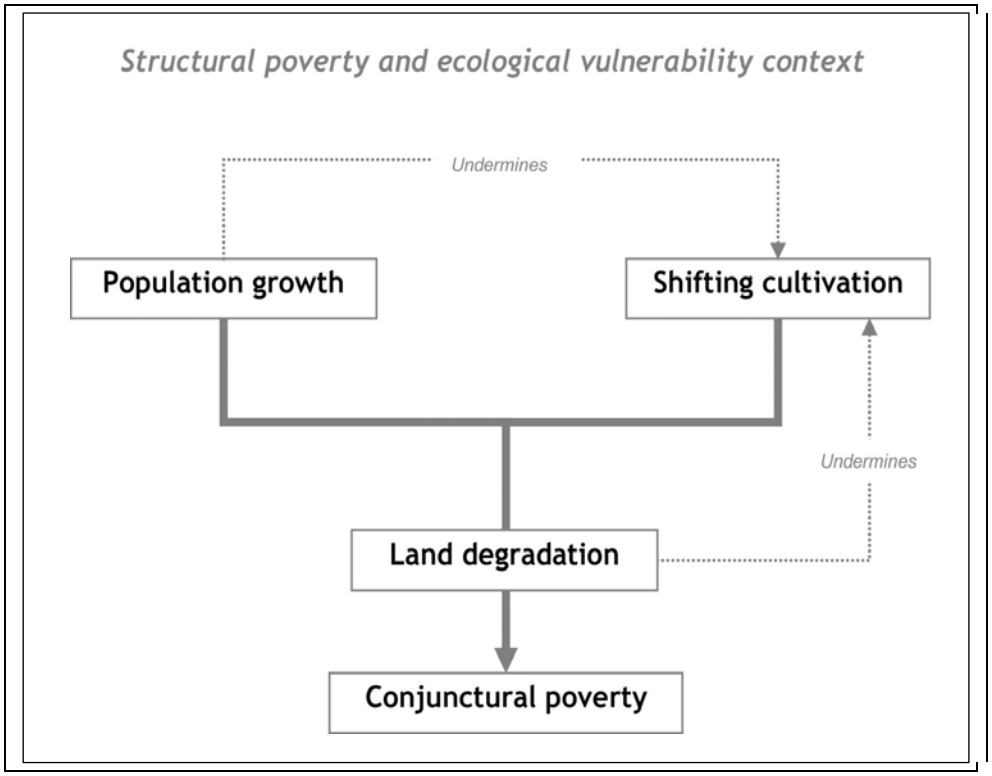
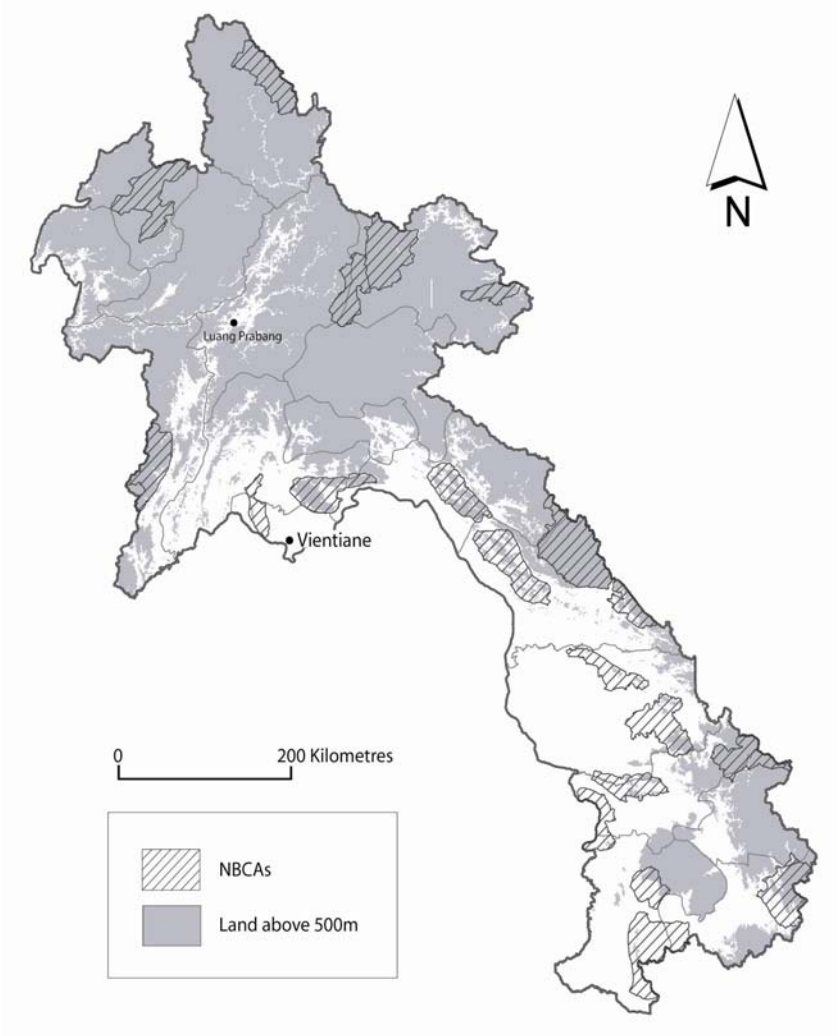


Figure 3: Agriculture and deforestation in northern Laos (Ban Lak Sip, May 2004)

Figure 4: National Biodiversity Conservation Areas in Laos



Endnotes

[i] While the Laotian authorities often distinguish rotational from pioneer shifting cultivation systems and their differing environmental impacts, such distinction appears to be a mere formality and, when it comes to the creation and implementation of policy, the two systems are systematically amalgamated.

[ii] From 1999 to 2003, agriculture represented between 49 and 55 percent of Laos' GDP with a very significant contribution of the lowlands largely oriented toward commercial production. During the same period, hydropower accounted for 23 to 33 percent of Laos' total exports (ADB 2006; IMF 2005).

[iii] The concept of Tropical Forestry Action Plan was developed during the mid-1980s by the FAO, the UNDP, the World Bank and the World Resources Institute (WRI) as an instrument to control deforestation in the tropics.

[iv] Illustrating the significant implication of international actors in Laos' environmental policy, between 1993 and 2004, no less than twelve different extra-national organizations (i.e. international conservation NGOs, bilateral and multilateral institutions) have provided financial and technical support to the National Forest Reserves (FUJITA 2004).

[v] Kaysone Phomvihane was a major leader of the socialist revolution, founding secretary-general of the LPRP and president of the Lao PDR between 1991 and 1992.

[vi] "L'éducation des ethnies comprenait, entre autres choses, le message politique insistant qu'elles devaient comprendre et accepter que l'État puisse utiliser les ressources naturelles, bois et hydroélectricité particulièrement, des zones montagneuses".

[vii] "Le Laos est un pays rêvé pour les ONG dites 'de développement': le gouvernement interdisant la création d'organisations non gouvernementales laotiennes, les ONG internationales ne peuvent, comme elles le font dans d'autres pays, 'passer le flambeau' à un relais local. Elles peuvent donc justifier de leur présence indéfiniment".