

## Land degradation in the Lao PDR: Discourses and policy

Guillaume Lestrelin <sup>a, b, \*</sup>

<sup>a</sup> University of Durham, Durham, UK

<sup>b</sup> IRD, UR 176, Vientiane, Lao Democratic People's Republic

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### ABSTRACT

While there is an important body of research on environmental discourses and policy in Southeast Asia, the situation in the Lao PDR remains understudied. This paper builds on debates related to environmental change and knowledge production and examines the socio-political construction of the current mainstream discourse on land degradation in Laos. It highlights that, despite significant uncertainties as regard the extent and severity of the issue, land degradation in the uplands is represented by the Laotian authorities and many of their development partners as a major and imminent threat to the development of the country. The paper also examines the way this perspective is translated into policies specifically aimed at resolving the upland issue and proposes an alternative reading of this process where mainstream discourse and associated policy appear partly shaped by the subjectivities and political economic projects of Laos' policy-makers. Finally, drawing on the case of Laos, the paper provides a critical reflection on conventional approaches to assessing socio-environmental issues and defining policy interventions.

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### Land degradation: facts and fictions

According to the Global Assessment of the Status of Human-induced Land Degradation (GLASOD), 65% 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, p. 75) and the FAO considers that all the land resources of Laos are degraded with 84% 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 (Fresco and Kroonenberg, 1992; Brookfield, 1999; Warren, 2002). Therefore,

measurements made at a particular scale may be contradicted by other measurements at different scales (Gray, 1999). In fact, while they may have some value as international references, macro-scale environmental assessments can also contribute to produce simplistic models which discount the complexity of socio-environmental interactions and/or provide a biased vision of land degradation issues. 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 landslides and catastrophic sediment discharge and floods in the lowlands.

\* Correspondence address: IRD, P.O. Box 5992, Vientiane, Lao Democratic People's Republic. Tel.: +856 20 59 39 443; fax: +856 21 41 29 93.

E-mail address: [g.lestrelin@gmail.com](mailto:g.lestrelin@gmail.com).

Fifteen years later, a number of empirical studies had discredited the thesis, highlighting that upland dwellers had a different perception of land degradation and different theories on the causality linkages, that rates of deforestation and erosion were not as serious as supposed, and that many upland farmers had developed effective conservation measures (e.g. Thompson et al., 1986; Ives and Messerli, 1989; Metz, 1991). Since then, many micro-scale and longitudinal studies have reiterated similar points in different contexts (e.g. Tiffen and Mortimore, 1994; Tiffen et al., 1994; Forsyth, 1996; Templeton and Scherr, 1999; Mazzucato and Niemeijer, 2001; Ravnborg, 2003). Clearly, none of the micro-scale studies mentioned here deny that land degradation processes such as those described in the Theory of Himalayan Environmental Degradation correspond in part to an empirical reality. However, they indicate that, depending on their scales and methods of observation, assessments can reach different conclusions regarding the causes and extent of land degradation. Perhaps more importantly, they indicate that the inclusion of different actors and viewpoints in the debate often leads to contradictory assessments. Hence, they highlight the way certain empirical observations are used to support environmental narratives and legitimate particular political interventions (Guthman, 1997).

According to Forsyth (2005), two main bodies of work can be identified in the literature analysing the construction of environmental narratives. Influenced by the Cultural Theory perspective, a number of scholars have focused on the role played by social structures in shaping environmental discourse (e.g. Thompson et al., 1986, 1990). For instance, challenging the Theory of Himalayan Environmental Degradation, Thompson et al. (1986) highlighted a number of different, sometimes conflicting environmental discourses which, they argued, are the reflections of different social groups (e.g. state agents, upland farmers, NGO workers) and their different worldviews. Although gathering actors in 'socio-cultural boxes' may be viewed as reductionist, the approach proves valuable for gaining insights into the links between human organization and political behaviour. For instance, even if some micro-scale studies suggest that the abovementioned 'downward spiral' model cannot be applied universally,<sup>1</sup> the latter still represents an important frame of reference for many policy actors. This is particularly true among international organizations where the temptation to link poverty and environmental degradation is recurrent (e.g. WCED, 1987; Durning, 1989; World Bank, 1992, 2006; UNEP, 1995; Dasgupta et al., 2005). To some extent, however, the popularity of the simple and easily generalisable 'downward spiral' model may reflect as much the attempts of land degradation specialists to 'theorize' human-environment interactions (e.g. Fabricius et al., 2007) as the large scale planner's standpoint of international organizations. In any case, it certainly fits rather well with the latter's macro, uniform approaches to alleviating poverty and environmental degradation (Forsyth et al., 1998).

Taking a different perspective, other scholars have focused on the role of discourse in modelling biased visions of past environmental history which, in turn, influence research, policy-making and development practices (e.g. Fairhead and Leach, 1995; Leach and Mearns, 1996; Bassett and Zuéli, 2000; Leach and Fairhead, 2000). For instance, looking at the deforestation issue in West Africa, Fairhead and Leach (1995) highlighted the persistence of a 'catastrophist' narrative conveyed through authoritative international environmental assessments. Structured by accounts from the colonial period and assumptions regarding the past existence

of a regional socio-environmental equilibrium (i.e. where West African populations and their 'traditional' lifestyles integrated harmoniously with an 'original climax vegetation' of primary forests), this discourse represents the region as having experienced dramatic forest loss during the last century as a consequence of population growth, social dysfunction and changing land use practices. Accordingly, it advocates strong conservation policy and state interventionism. Yet, as pointed out by the same authors, this representation of West African landscapes does not exactly concur with empirical evidence. In many instances, local land uses appear rather different and rates of deforestation lower than what is described in the 'catastrophist' narrative which, in addition, tends to overlook long-term, climate-induced dynamics of transition between savanna and closed forest.

By misrepresenting complex causality linkages and/or understating local experience, such discursive simplifications or falsifications not only limit our understanding of the socio-environmental interactions, they can also have important implications in terms of policy. For instance, a conclusion of the West African narrative challenged by Fairhead and Leach (1995) is that, if local populations are unable to preserve their environment, the responsibility for managing natural resources must be transferred to – or, at least, shared with – external actors such as state agencies, international organizations or NGOs (see also Bassett and Zuéli, 2000; Goldman, 2001). In other words, protection of the 'public interest' and reduction of local actors' control over their environment often go hand in hand.

Hence, as argued by Guthman, "the facts about environmental deterioration [can] become subordinate to the broader debates on the politics of resource use" (1997, p. 66, original emphasis). For instance, we may observe situations where powerful actors attempt to strengthen or expand their political influence by being both producers and beneficiaries of a particular environmental discourse. In this regard, 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 technocratic 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, p. 709). More generally, the production of environmental knowledge can be a means for some actors to 'infiltrate' political spaces usually dominated by others. Hence, from a redefinition of the environmental conditions emerge new ecological rationalities and new solutions to environmental 'problems' which, in turn, require new or restructured institutions, new regulatory regimes and, accordingly, a re-organization of land and natural resource management. Through this process, local socio-environmental interactions may be radically transformed.

Building on a review of official documents, national statistics, project reports and academic literature, this paper examines the mainstream environmental discourse in the Lao PDR, its policy outcomes and political implications. While environmental conservation is a core objective of national development policy (e.g. GoL, 1993, 2000, 2003), so far only a few studies have provided an analysis of the justificatory discourse developed by the Laotian authorities and their development partners. According to these studies, a key narrative in the official discourse represents shifting cultivation – widely practised in the uplands of the country – as a primary cause of deforestation (e.g. Ireson and Ireson, 1991; Seidenberg et al., 2003; Fujita, 2004; Ducourtieux et al., 2005). Further, as suggested by Aubertin (2003), shifting cultivation prac-

<sup>1</sup> Just as the findings of micro-scale studies cannot be interpreted as universal models and/or in isolation from their specific socioeconomic and ecological context (see World Bank, 1995).

tices are represented as a threat not only to forests but also to biodiversity, lowland water supply and hydropower production. Behind these concerns, she argues, the Laotian authorities intend to strengthen their control over upland ethnic minorities (see also Ireson and Ireson, 1991; Goudineau, 2000).

These conclusions resonate with the work of Forsyth (1996) and Walker (2003) in the uplands of northern Thailand. As described by these scholars, a core element of the official environmental discourse relates to the critical role played by upland populations in causing deforestation and, consequently, reducing downstream water supply, engendering significant soil erosion and lowland sedimentation. Showing that there is very little empirical evidence of links between forest clearing and downstream water shortage, Walker (2003) argues that Thai rural development policy puts too much emphasis on regulatory measures that threaten upland livelihoods without considering the increasing water consumption of lowland populations. Similarly, combining biophysical measurements and a survey of local perceptions, Forsyth (1996) shows that upland farmers in his research area have developed soil conservation strategies and argues that most lowland sedimentation is likely to be of natural origin or arising from road construction. He then suggests that upland agriculture is probably overrated as a source of lowland sedimentation in Thailand and that “government policies aiming to reduce sedimentation and water shortages by reforestation and resettlement may not achieve these environmental goals, and may instead be reflective of traditional state concerns to gain control over remote land and minorities” (Forsyth, 1996, p. 388).

As a contribution to this debate, the present study is an attempt to deepen the analysis of Laos’ official environmental discourse and its political implications. The next section of the article argues that the mainstream discourse in Laos is structured around two narratives. On the one hand, deforestation and land use pressure generate a ‘chain of degradation’ that stretches from soil erosion in the uplands to siltation, 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 this process lead to a ‘downward spiral’ of increased poverty in the uplands and increased land degradation in the whole country. The third section of the paper highlights that, despite the limited and disputed empirical evidence in support of the official environmental discourse, rural development policy 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 use regulation and population resettlement. Finally, the fourth section proposes an alternative reading where mainstream environmental discourse and development intervention appear partly shaped by the political and economic interests of policy makers and current political elites.

## Mainstream environmental discourse in Laos

### *The ‘chain of degradation’*

Since the late 1980s, the state of Laos has placed environmental conservation at the core of its rural development strategy. In general, the Laotian government and major 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, p. 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, pp. 53–54).

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 by presenting, in ordered sequences, 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. GoL, 1993, 2003; UNEP, 2001; MRC, 2003; ADB et al., 2006). Yet, many scholars call into question perspectives which link upstream and downstream processes in simplistic cause-and-effect models (e.g. Ives and Messerli, 1989; Calder, 1999; Walker, 2003; Bruijnzeel, 2004). In fact, as the following text intends to demonstrate, little indisputable evidence is available regarding the extent and processes of land degradation in Laos (see Fig. 1) and, thus, the prevailing environmental discourse appears largely based on a combination of assumptions coupled with economic exigencies and political desires.

### *Deforestation*

The core premise of the ‘chain of degradation’ narrative is that the forested areas of Laos have decreased from more than 70% of the country in the 1940s, to 64% in the 1960s and 47% at the end of the 1980s (UNEP, 2001; World Bank et al., 2001; GoL, 2005). Regarding more recent figures however, opinions are divided (Table 1). In its State of the World’s Forests, the FAO presents optimistic figures with a forest cover of 53.9% in 1995 (FAO, 1997). In contrast, the MRC estimates that forest cover has steadily decreased since 1989 to represent 39.7% of the territory in 1997 (MRC, 1997). Close to the latter assessment, the Laotian authorities estimate that forested land currently represents 41.5% of the country, i.e. 98 270 of the 236 800 square kilometres making up the country (GoL, 2005). Regarding annual deforestation rates, estimates also vary from one actor to another. Officially, some 70 000–220 000 ha 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 ha per year (MRC, 1997). Four years later, the UNEP based its predictions on official figures from the 1980s to state that,

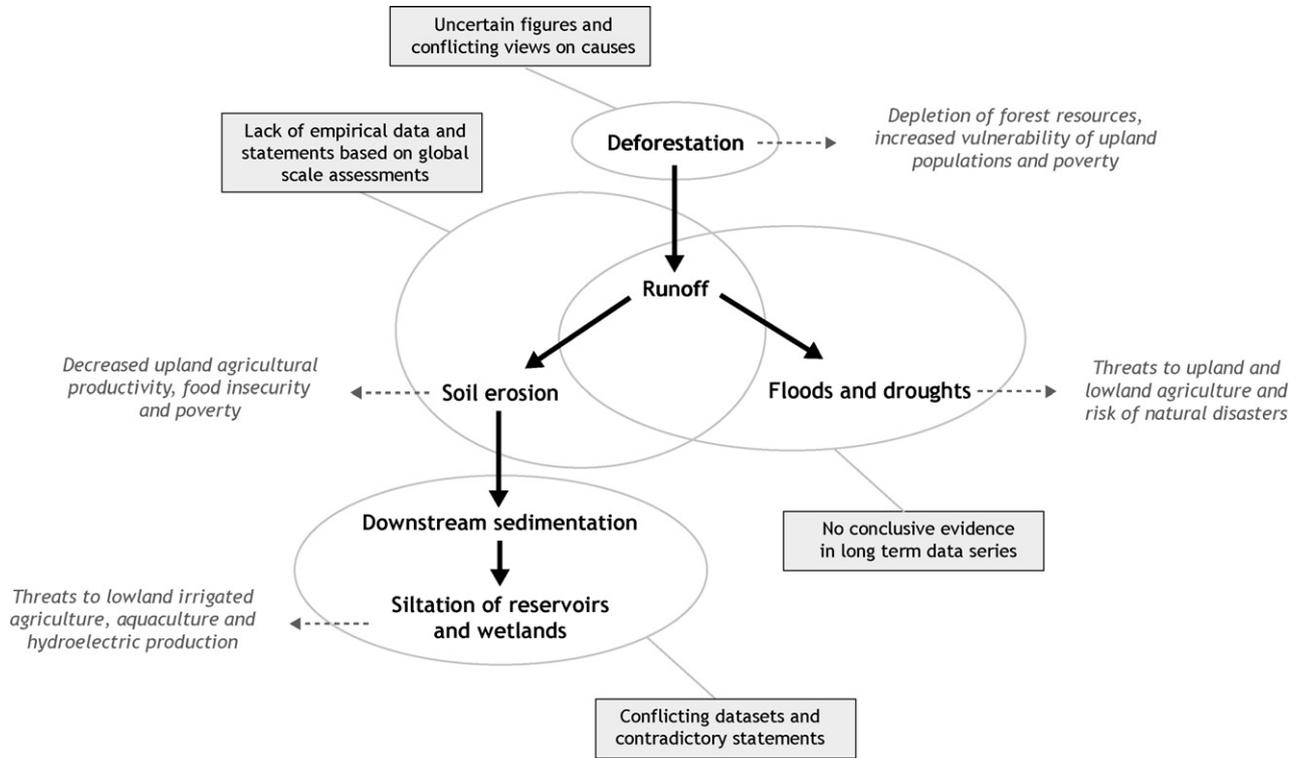


Fig. 1. The 'chain of degradation' narrative and its limitations.

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%       | –                                | GoL (2005), World Bank et al. (2001) and UNEP (2001) |
| 1960 | 151 500      | 64%       | –                                |  |
| 1989 | 110 000      | 47%       | –                                |  |
| 1994 | 110 000      | 47%       | 700–2200                         | GoL (1999)   |
| 1995 | 124 350      | 53.9%     | 1480                             | FAO (1997)   |
| 1997 | 93 898       | 39.7%     | 540                              | MRC (1997)   |
| 2001 | 116 000      | 49%       | 3000                             | UNEP (2001)  |
| 2005 | 98 270       | 41.5%     | –                                | GoL (2005)   |

with a deforestation rate of 300 000 ha per year, “the country’s last remaining forest areas will disappear over the next 38 years” (2001, p. 37).

Laotian authorities and international development agencies also disagree on the main causes of deforestation. Officially, agricultural expansion and shifting cultivation are the primary causes of forest destruction (Fig. 2). However, for most international development actors, logging – both legal and illegal – occurs first. According to the MRC (2003), at the Mekong River basin level, while most of the deforested areas are cultivated, in many cases, agriculture has expanded subsequently to deforestation. Similarly, local case studies provide a more nuanced view of the respective impacts of shifting cultivation and logging activities. For instance, analysing land use and cover change in a village of the Vientiane municipality, Thongmanivong et al. (2005) highlighted two different processes and causality linkages. While shifting cultivation has indeed been a main proximate cause of deforestation in the village, the actual surface area deforested during the past 50 years has remained very small. In contrast, forest degradation and fragmentation due to commercial logging have been much more significant processes, with more than one third of the study area converted to shrub land and degraded forest.



Fig. 2. Shifting cultivation in northern Laos (Ban Lak Sip, May 2004).

Furthermore, a number of scholars suggest that market integration and crop diversification have limited the actual impacts of shifting cultivation on forested areas. For instance, a study of three upland villages in Huaphan province shows that, despite significant land shortage reflected in shortened fallow periods, the farmers have been able to maintain very low deforestation rates (1% per year over a 10-year period) by diversifying their production (Seidenberg et al., 2003). At a larger scale, an analysis of satellite imaging covering the four northern provinces of Luang Prabang, Oudomxai, Bokeo and Luang Namtha indicates that, between 1993 and 2000, the extent of woodlands (forests and plantations) has generally increased while shifting cultivation has decreased in area and has become more diversified and more market-oriented (Thongmanivong and Fujita, 2006).

#### *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. GoL, 1999, 2003; ADB, 2001; UNEP, 2001; MRC, 2003). At this stage however, with the exception of some statements based on the questionable GLASOD (see Introduction), reports from governmental and international development agencies provide very little, and rather outdated empirical evidence to document the processes and linkages involved. In fact, most of the agencies reporting on environmental change in Laos base their assessment and recommendations on a generic, a priori model which is applied regardless of the exact socio-environmental context (or multitude of contexts). Thus, on the one hand, they present the consequences of deforestation and agriculture for runoff and soil erosion as self-evident threats. But on the other hand, they acknowledge that data on land degradation and understanding of the processes are fairly limited.

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, p. 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, p. 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, p. 77). In fact, if the role of upland forest conversion and agriculture in fostering soil erosion has been established by numerous case studies in Laos and elsewhere in Southeast Asia, research also warns us against easy generalisations, showing that the importance of the soil losses depends very much on the nature of the cropping systems and crop management practices (e.g. Chaplot et al., 2005; Sidle et al., 2006; Valentin et al., 2008; Dupin et al., 2009). Besides, it must also be noted that the conception of deforestation and agriculture as the most significant causes of increased runoff and soil erosion is increasingly challenged by long-term studies at the catchment scale. For instance, research in northern Thailand suggests that roads and road building may have much more significant impacts on catchment health (e.g. Ziegler and Giambelluca, 1997; Douglas, 1999; Walker, 2003; Sidle et al., 2006).

#### *Sedimentation, floods and droughts*

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 20 years. They are among the highest in the region, although the exact causes for the increase have not yet been determined"

(2001, p. 52).<sup>2</sup> Some case studies also point towards the same direction arguing that forest clearing for agriculture represents a major cause of sedimentation and a direct threat for the functioning of reservoirs in Thailand (e.g. Lorsirirat, 2007). In contrast, according to the MRC (2003), sediment levels have generally 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.<sup>3</sup>

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, pp. 6–7). In general, as pointed out by Campbell (2007), a joint analysis of environmental perceptions and hydrological data in the Mekong river basin shows a very significant mismatch between the main issues put forward by government staff and international experts and the actual situation as observed through measurements of water quality, sedimentation levels, dry season flow, and flooding frequency and extent. In contrast with the consensus found among state and international agencies, available biophysical data do not point towards a general trend of increased sedimentation and flow disturbance. A number of modelling studies suggest however that forest conversion for agriculture is likely to result in increased soil moisture and greater wet season stream flows (Thanapakpawin et al., 2007; Costa-Cabral et al., 2008).

Overall, 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 robust 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 Fig. 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 'downward spiral'*

Due to their extent and the particular biophysical and socio-economic context that characterizes them, the uplands are considered as a very specific issue for Laos' development actors. Importantly, they are assumed to be the centre stage of a 'downward spiral' of land degradation and poverty (Fig. 3).

#### *Ecological fragility and endemic poverty*

Upland areas are commonly estimated to represent 80% of the country and the major part of the forested areas. In 1989, according to the Ministry of Agriculture and Forestry (GoL, 1992), more than 70% of Laos' forests were concentrated on steeply sloping land (i.e.

<sup>2</sup> 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).

<sup>3</sup> In fact, modelling studies point towards the opposite direction arguing that the construction of dams and reservoirs in the upper Mekong river basin may prevent nutrient-rich sediments from reaching the Tonle Sap Lake, with important consequences for the fertility of the aquatic ecosystem (e.g. Kummu et al., 2006).

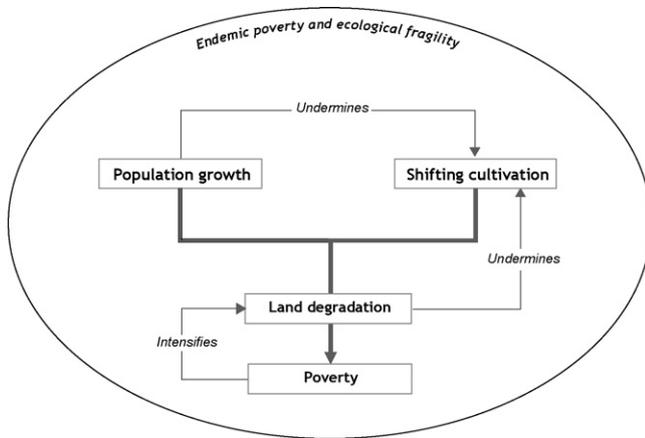


Fig. 3. Population growth, shifting cultivation and the 'downward spiral' of land degradation and poverty in the uplands.

slope angle > 20%). 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 more prone to soil erosion than any other area of the country. According to the FAO's world land resource assessment (2000), with more than half of its territory characterized by very steep slopes (i.e. slope angle >30%) and abrupt textural contrasts in its soil profiles, Laos ranks first in the countries with the highest relative extent of steeplands and eleventh in the countries most affected by erosion hazard. This perspective is further solidified by the 'chain of degradation' narrative (see above). 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.

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. If the information currently available at the national scale does not allow a clear 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% 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, p. 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, p. 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. UNDP, 2002; GoL, 2003; Andersson et al., 2006). 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, p. 75, emphasis added).

This perspective denotes what Rigg (2005) describes as the 'creation of a new poverty' in Laos. Indeed, be that for rigidly economic 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, subsistence economy is a prime cause of poverty and therefore an ill to be eradicated through development propelled by market integration. 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. Further adding to their specificity, the uplands are assumed to be embarked on a 'downward spiral' of land degradation and poverty that feeds the upstream-downstream 'chain of degradation' described above.

#### Population growth, shifting cultivation and the 'downward spiral'

A large part of the debate on the Laotian uplands crystallizes around the population growth shifting cultivation issue. Overall, with a density of just 24 inhabitants per square kilometre, and even if the population continues to increase by 2.1% per year (GoL, 2006), demographic pressure does not appear as an immediate major threat for the environment. Nevertheless, some agencies argue that, if only the 'potential arable land' is considered, the net population density will 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% of the national territory is actually suitable for agricultural purposes and, in view of rapid population growth, recommends conservation measures and forestry in the remaining area (GoL, 1999).

In this context, shifting cultivation represents a major source of contention. 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. According to the FAO (2001), the practice is essentially concentrated in the uplands with approximately 70% of the fields located on land with slopes greater than 20%. Among scholars and development practitioners, the practice is often considered as productive, sustainable and well adapted to the upland context (e.g. Fox, 2000; Chamberlain, 2003; Raintree, 2003; Kerkhoff and Sharma, 2006). While these authors acknowledge that shifting cultivation can lead to environmental degradation and poverty, they consider that the latter issues are linked to a disruption of the traditional cropping systems by inappropriate or misapplied land regulations:

"The main threats to rotational swidden systems are from misapplied land allocation practices which reduce rotational cycles and deplete soils, resulting in unsustainable yields. Thus, while alleged runaway population increase among the ethnic minorities has become the rallying point for the urgent introduction

of changes to swidden systems, there is no evidence to justify this urgency in Laos, especially in light of the fact that rotational swidden cultivation in the tropics is one of the most efficient agricultural systems in the world” (Chamberlain, 2003, p. 31).

In complete opposition to this viewpoint, the official discourse considers that, in the present demographic conditions, the practice is both environmentally destructive and poverty-creating.<sup>4</sup> As argued by the Laotian authorities, “most sustained severe deforestation and land degradation in Lao PDR is associated with shifting cultivation” (GoL, 2000, p. 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, p. 4). And such an alarming picture is not the preserve of the government:

“Most land degradation is associated with shifting cultivation, particularly in areas where population pressure has led to a significant decrease in the rotation period or where traditional lowland farmers encroach on neighbouring uplands to make up for low and often declining yields on their lowland paddy fields” (UNEP, 2001, p. 51; see also UN, 2000).

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 portrayed as the “desperate ecocide” of the poor (Blaikie, 1985, p. 117) – that pushes them inexorably towards more poverty and environmental degradation (Fig. 3). 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 considered by the Laotian authorities and some 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.<sup>5</sup> 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.

Similar to Forsyth and Walker’s (2008) account of Thailand, the debate over shifting cultivation in Laos appears thus to be reduced to two antagonistic narratives: one that represents the practice as an ecologically appropriate and productive cropping system – which can allow for sustainable development of the uplands provided that it is not disrupted by state regulation – and another one that represents the traditional system as having reached its demographic limits and, hence, as a major cause of environmental degradation and poverty in the country. There may be various explanations for the existence of these two competing visions. Most probably, the abovementioned uncertainties as regards the extent of, and the links between upland deforestation, shifting cultivation and land degradation (see The ‘chain of degradation’) contributes to leave the way open for various interpretations. In line with Forsyth

and Walker (2008), however, this paper argues that the different narratives above are not the mere results of scientific uncertainty but that they are also shaped by the values and political economic projects of their proponents. As a starting point to highlighting the latter process, the next section focuses on the perspective of the Laotian authorities and looks at the ways the ‘chain of degradation’ and upland ‘downward spiral’ narratives have influenced rural development policy over the past two decades.

### Implications for policy

The official perspective on land degradation has had wide-ranging impacts on rural development policy (Fig. 4). By picturing rapid upland deforestation as a major threat to both upland and lowland natural resource and economies, the ‘chain of degradation’ narrative has directly influenced the creation of a Tropical Forestry Action Plan (1989), the demarcation of National Protected Areas (1993) and the implementation of a Forest Classification scheme (1993). At the same time, the idea that the uplands are embarked in a ‘downward spiral’ of land degradation and poverty has favoured the design of a two-tiered national development strategy emphasizing environmental conservation and poverty reduction in the uplands (e.g. the 1999s Strategic Vision for the Agricultural Sector). Assumptions as regards direct correlations between remoteness, subsistence farming and poverty, and the role of these factors in sustaining the ‘downward spiral’ have also provided incentives for resettlement policy (formalized in 1998) and the relocation of upland communities closer to markets and state extension services. Finally, the two narratives have influenced Land Use Planning and Land Allocation policy (1993). Reflecting official concerns for upland deforestation and shifting cultivation, the actual implementation of the land reform programme in the uplands has largely favoured the demarcation of forest conservation areas over the allocation of agricultural land. As a result of these measures, what was formerly considered as a homogeneous space of mountains and forests has thus been redefined by the Laotian state and its international development partners into various ‘eco-zones’, each one with its particular set of resources, users and regulations (Goldman, 2001).

### Land zoning and land use regulation

Following the resolutions of the first national forestry conference held in 1989 and as a direct consequence of official concerns about the wide-ranging impacts of deforestation on upland and lowland natural resource and economies, the Tropical Forestry Action Plan recommended the implementation of forest conservation and tree plantation measures over an area of 170 000 square kilometres (i.e. 70% of the country).<sup>6</sup> A few years later, in 1993, the Laotian state established a 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—a concept promoted by the World Bank and major international conservation NGOs. They were further expanded to 20 areas – accounting for some 30 000 square kilometres or 12.5% of the country – and, line with other Southeast Asian states, renamed National Protected Areas (NPAs).<sup>7</sup> Looking at

<sup>4</sup> While the Laotian authorities often distinguish rotational from pioneer shifting cultivation systems and their differing environmental impacts, such a distinction appears to be a mere formality and, when it comes to the creation and implementation of policy, the two systems are systematically amalgamated (Rigg, 2005).

<sup>5</sup> From 1999 to 2003, agriculture represented between 49% and 55% of Laos’ GDP with a very significant contribution of the lowlands largely oriented toward commercial production. During the same period, hydropower accounted for 23–33% of Laos’ total exports (IMF, 2005; ADB, 2006).

<sup>6</sup> 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.

<sup>7</sup> Illustrating the significant implication of international actors in Laos’ environmental policy, between 1993 and 2004, no less than twelve different extra-national

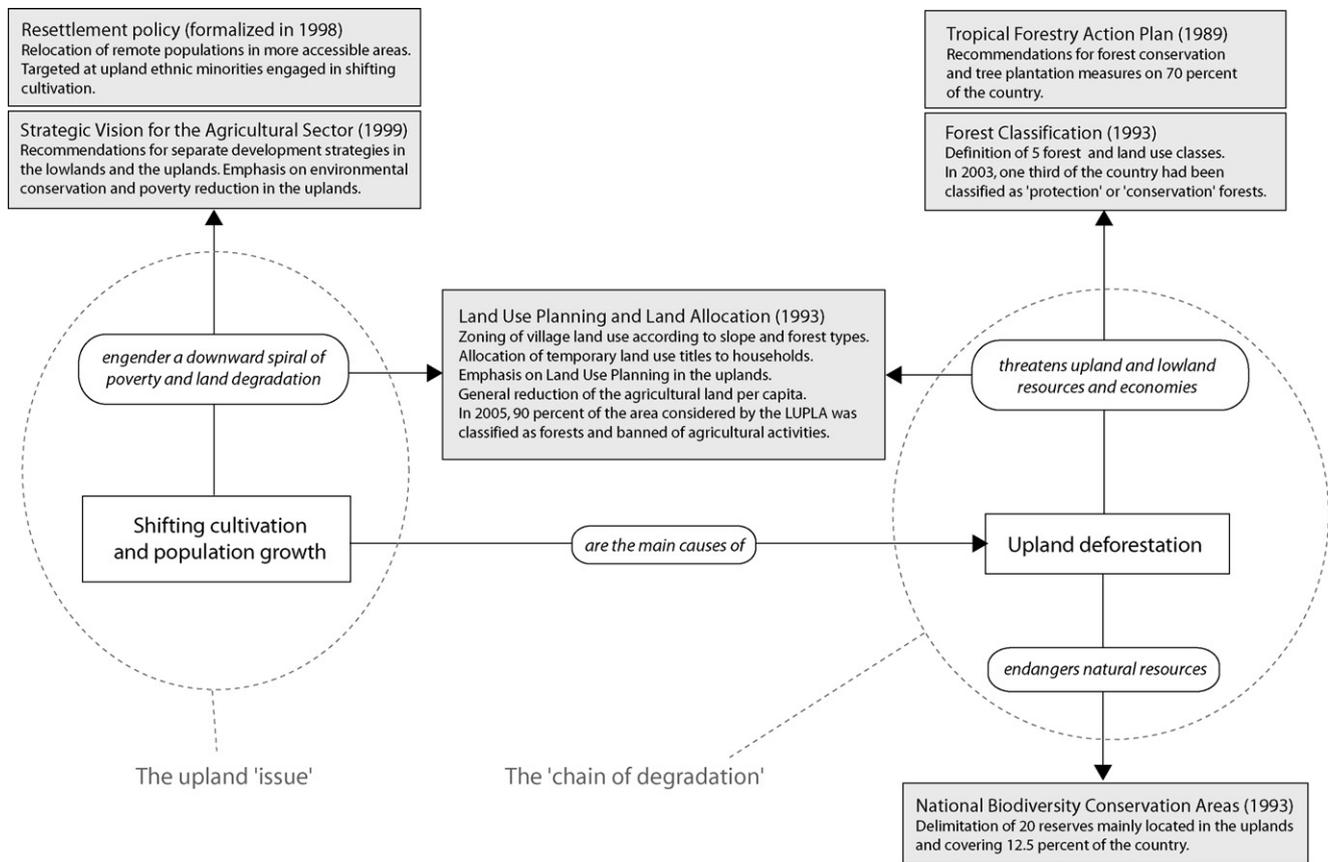


Fig. 4. Environmental narratives and the main instruments of rural development policy.

their spatial distribution within the country, it is clear that NPAs are largely aimed at conserving upland ecosystems (Fig. 5).

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. Renewed in 1996 with the Forestry Law, 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 of young fallow forests.
- 'Production forest' (*pa somsay*) where limited logging and collection of forest products are permitted.
- 'Degraded forest' (*pa xutsom*) which can be allocated for tree plantation, livestock farming or permanent agriculture. Shifting cultivation is not allowed.

Through the Land Use Planning and Land Allocation program (LUPLA), this classification has become the main instrument of an 'area-based' approach to development in Laos (Rigg, 2005). This

organizations (i.e. international conservation NGOs, bilateral and multilateral institutions) have provided financial and technical support to the NPAs (Fujita, 2004).

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 ha per active individual, of which a maximum of 1 ha is permitted for upland rice, 15 ha of pastureland, 3 ha of cash crops and 3 ha 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

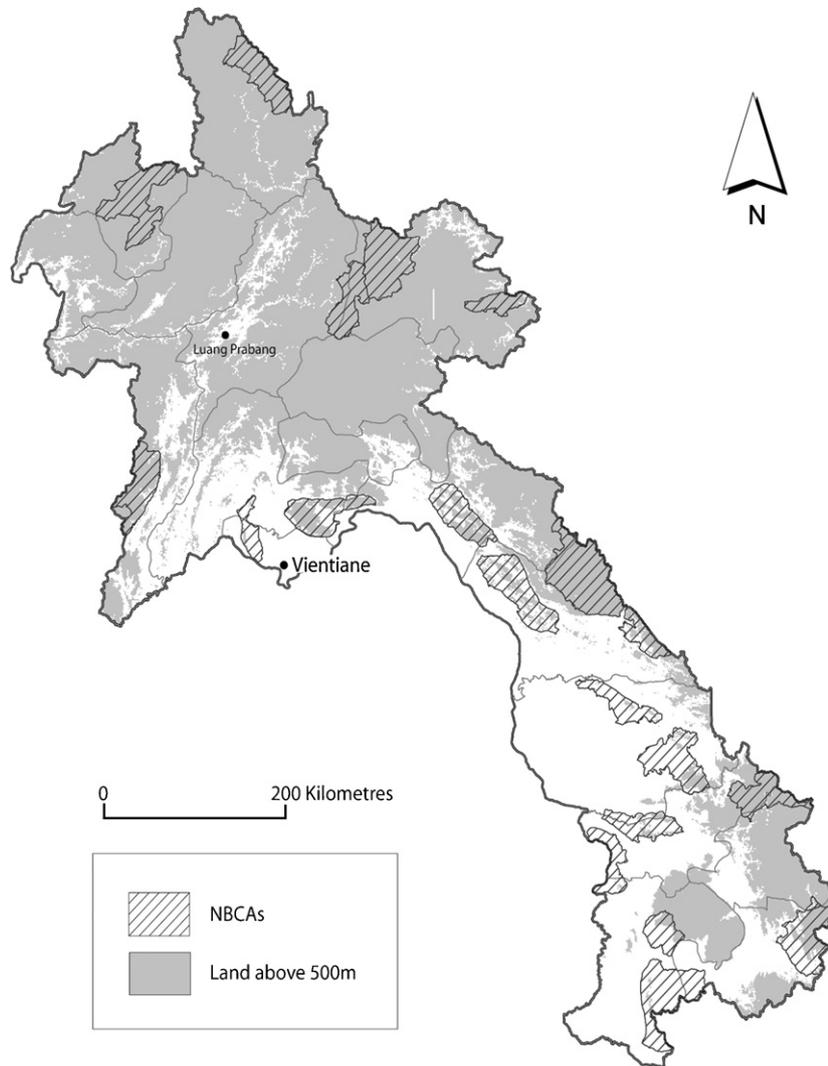


Fig. 5. National Protected Areas in Laos.

process. Yet, it seems rather doubtful that any village in Laos would be able to allocate the maximum 22 ha of land to any of its residents without penalizing the rest of the community. Indeed, between 1995 and 2004, around 90% of the area considered by the LUPLA has been classified as forested land on which agricultural activities are banned (GoL, 2005) and, 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. NAFRI and LSUAFRP, 2002; Evrard, 2004).

While the official scope of the LUPLA is national, its objectives and actual implementation appear very much influenced by the official discourse on land degradation. For instance, among the eight objectives of the program, five are largely aimed at resolving the abovementioned upland ‘issue’: 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.

In addition, national agencies and internationally funded projects involved in implementing and/or supporting land reform are often ‘specialized’ in the shifting cultivation issue: e.g. the national ‘Shifting Cultivation Stabilisation Centre’ which provides statistics on the implementation of the LUPLA and the ‘Lao-Swedish Shifting Cultivation Research Sub-program’ which was in charge of the early experimentations of the LUPLA in Luang Prabang province.

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 7130 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). This divergence suggests that, in contrast with the lowlands where the focus is on the establishment of secure land rights, in the uplands, the primary objective of the land reform is the intensification of agriculture in order to avoid environmental degradation and alleviate poverty. In other words, the top priority for the uplands would not be land allocation, but rather land use zoning, the implementation of environmental regulations and the improvement of agricultural systems deemed unproductive (Ducourtieux et al., 2004).

After more than two decades of implementation and despite being officially aimed at improving the living conditions of the upland-dwelling communities, many studies have shown that Laos' programme of land reform has had rather negative impacts on upland livelihoods. For scholars like [Evrard \(2004\)](#), [Ducourtieux et al. \(2005\)](#) and [Lestrelin and Giordano \(2007\)](#), it has notably led to significant agricultural land shortage, a general degradation of working conditions and farm productivity and, hence, decreased food security and increased poverty. Further down the line, this degradation of the living conditions has been described as a cause of cultural trauma and uncontrolled migration ([Vandergest, 2003a](#); [Evrard and Goudineau, 2004](#); [Moizo, 2006](#)). In fact, it would seem that the pessimistic conclusions of this growing number of studies are increasingly taken into account by the Laotian authorities. 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](#)). A similar objective is put forward in the Forestry Strategy to the Year 2020 ([GoL, 2005](#)).

### 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](#), p. 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 led 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 87 Focal Sites by 2002. These sites would be the recipient for 1200 villages and 450 000 people (12% 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. [Romagny and Daviau, 2003](#); [Evrard and Goudineau, 2004](#); [Baird and Shoemaker, 2005](#); [Jones et al., 2005](#)).

### 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](#), p. 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](#), p. 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](#), pp. 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, an important territorialisation process is under way.

### Territorialisation

Territorialisation has been defined as the process through which states "divide their territories into complex and overlapping political and economic zones, rearrange people and resources within these units, and create regulations delineating how and by whom these areas can be used" ([Vandergest and Peluso, 1995](#), p. 387). In that sense, the abovementioned land reform, resettlement policy and agricultural development strategy represent major instruments for the state to territorialize its power and, more generally, to expand or strengthen its control over upland populations

and resources. Through these political measures, the uplands are demarcated as a very particular area which corresponds to specific development objectives and regulations. This area is further subdivided into various rationalized zones according to slope, ecological function and integrity, and 'optimal' land use. The process goes so far that forest lands are designated at the behest of the state regardless of existing land cover (Article 4 of the Forestry Law).

In effect, through a scientific approach and legal instruments largely designed to deal with the land degradation 'issue', the uplands and their resources are made 'legible' to the state (Scott, 1998). However, besides legibility, what is at stake is the control of the relationship between upland communities and their environment. Thus, according to criteria related to economic productivity and environmental sustainability, upland-dwelling households are allocated land for determined, yet temporary uses. At the same time, for the purpose of alleviating poverty, the most remote communities are prompted to leave their traditional lands and to gather in resettlement areas designated by the state. Looking at the broad picture, by representing the uplands as a critical issue for the development of the country, the official environmental discourse legitimises the intervention of the state (and its development partners) in local affairs and contributes to drive a very significant restructuring of the local modes of access to upland resources.

### The 'hidden transcript'

Despite its fragile empirical basis, Laos' official environmental discourse appears thus to have very significant implications in terms of policy and, from there, in terms of regulation of local land use and settlement patterns. However, a reverse reading of this political process can lead to a number of counter-narratives where mainstream discourse and ensuing policy are partly shaped by the viewpoints and interests of policy-makers and political elites.

#### *Modern lowlands, backward uplands*

As discussed above, references to the contrast between 'modern lowlands' and 'underdeveloped uplands' are recurrent. Yet, this line of thinking appears sometimes 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 explain 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 and backward ways. 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 describing rural areas as "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, p. 87).

Such considerations also filter through national policy on ethnic minorities. Ever since independence, along with the subdivision of the national space described above, a major preoccupation for the authorities has been to classify the numerous ethnic minorities populating the country. The first official classification adopted after 1975 identified some 68 minorities,<sup>8</sup> gathered into three groups

according to residence patterns: 'lowland Lao' (*Lao loum*) corresponding to the Lao-Tai ethnolinguistic group, 'midland Lao' (*Lao theung*) supposedly encompassing all the Austro-Asiatic minorities and 'highland Lao' (*Lao soung*) which is aligned to the Hmong-Yao and Tibeto-Birman minorities. As pointed out by some scholars, this classification was part of a wider attempt to build a sense of national identity (Jerndal and Rigg, 1998; Goudineau, 2000). Indeed, behind the subdivision – often represented on bank notes, posters or calendars by three 'sisters' in their ethnic outfits – is the idea that, notwithstanding differences between ethnic groups, all can be considered Lao. Although it was officially abandoned in 1981, the topographically based trinity still appears in many official documents and has, in fact, become the main instrument of ethnic identification and differentiation for the people themselves. For instance, in a majority of villages, the population census undertaken every year by the local authorities applies the threefold classification without further details and, notwithstanding the aberration it represents, it is not unusual to hear of somebody being described as speaking 'midland Lao' or 'highland Lao'.

Despite the aims, some scholars suggest that the practical applications of the national ethnic classification are not exempt from 'sociocultural discrimination'. As described by Goudineau (2000), the Lao Front for National Construction adapts its policy on ethnic minorities in function of their traditions. In this process, minorities' practices and beliefs are classified as 'good' or 'bad' in the light of their compatibility with the 'national' model of modernity. Yet, as Kaysone Phomvihane<sup>9</sup> 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 *Lao theung* and the *Lao soung* – shifting cultivation of course, but also opium cultivation, non-Buddhist beliefs, and blood sacrifice. In this regard, Laos is not an exception. In fact, all across mainland Southeast Asia, "the prevailing wisdom is one that is constructed in the lowlands, by lowlanders, and more particularly in the ministries of Bangkok, Rangoon, Hanoi and Vientiane" (Rigg, 2005, p. 67).

One of the consequences of this situation is that a sense of superiority has emerged among the 'lowland Lao' who sometimes consider the ethnic minorities as economically and culturally backward populations (Stuart-Fox, 2005).<sup>10</sup> In the end, in a similar vein to Vandergeest (2003b) account of Thailand, Laos' environmental politics appears significantly 'racialized'. By picturing the uplands as both epicentre of environmental degradation and residence of poor ethnic minorities engaged in traditional ('backward'), yet unsustainable land uses, the official environmental discourse places ethnicity at the centre stage of the land degradation 'issue'. In that sense, land degradation becomes a sociocultural issue and, to some extent, the 'Laoization' of upland minorities' cultures and livelihoods might thus come to be seen as a necessary step towards controlling environmental degradation and alleviating poverty (Ireson and Ireson, 1991).

#### *State project, political elites and minorities*

The negative outcomes of rural development policy – land regulation and resettlement in particular – have led various authors

<sup>9</sup> Kaysone Phomvihane was a major leader of the socialist revolution, the founding secretary-general of the LPRP and president of the Lao PDR between 1991 and 1992.

<sup>10</sup> 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'.

<sup>8</sup> The total number of ethnic minorities has been reassessed on several occasions, going from 68 in 1975 to 40 in 1991, 47 in 1995, and 49 in 2000.

to suspect a hidden agenda of the state, including a takeover of the lucrative forest resources (Ireson and Ireson, 1991) and 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 (Goudineau, 2000; Baird and Shoemaker, 2005). For Goudineau, even the investment of the Laotian authorities in education seems to be partly directed towards these objectives since “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, p. 26, my translation).<sup>11</sup> In fact, without asserting the existence of a Machiavellian plot orchestrated by influential parties, it can nevertheless be argued that Laos’ official environmental discourse and upland development policy serve a number of political and economic interests for two, partly co-constitutive actors: the Laotian state and its political elites.

From the state’s viewpoint, hydropower and forestry represent very important sources of export revenues and are among the highest priority sectors for investment (GoL, 2003). As such, they require tight control. To a significant extent, this objective is justified by the official representation of a national land degradation ‘issue’ linking upland deforestation with downstream sedimentation and water shortage. Motives related to ‘war politics’ can also provide additional explanations for increased state control in the uplands. Indeed, for a recently independent state marked by many years of war and the partially successful attempts of the French and American authorities to turn ethnic minorities against the socialist insurgents, remote communities may represent a national security issue (Stuart-Fox, 2005) and, as such, they should be controlled more firmly. Ultimately, even if it is certainly not their official purpose, land reform and resettlement represents two powerful means for the state to increase its control over lucrative natural resources and potentially subversive populations.

Besides state preoccupations, Laos’ official environmental discourse may also be seen as influenced by the economic interests of the country’s political elites. For instance, the reluctance of the government to refer to logging as a main cause of forest clearing can be explained by the fact that the activity represents a major source of revenue for the army. Indeed, in 1992, partly for the purpose of financing the army’s operational costs and incomes, all logging rights were handed over to three military-owned companies (Goldman, 2001; Lang, 2001), with the consequence that any action undertaken against logging activities would also go against the interests of high-ranking military officers with influential positions in both the Laotian government and the Lao People’s Revolutionary Party (LPRP) – the sole legal political party of the country.<sup>12</sup>

Finally, when considering the place of the minorities in the political life of the country, the implications of Laos’ environmental policy can also be analysed 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, p. 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. Thus, 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).

Pushing the reasoning further, one of the consequences of this imbalance of power is that the lowland Lao are in a position to instrumentalize the environmental discourse in order to expand their political influence to the most marginal areas of the country. In this respect, the ‘chain of degradation’ narrative (see The ‘chain of degradation’) can provide valuable 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 practising shifting cultivation are to be blamed and controlled. Hence, presented as solutions to the land degradation ‘issue’, land zoning, land use regulation and resettlement can legitimize and contribute to broader attempts of the Laotian state and, indirectly, the lowland Lao political elites to control lucrative 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 some of the country’s most valuable resources but also the prosperity of the lowland populations, may well constitute more a ‘lowland myth’ than a reality. Yet, as suggested by a number of quotes above, this representation appears to be also accepted, and even promoted by a number of international development agencies.

#### *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 the requirements of the International Monetary Fund, the World Bank and the Asian Development Bank (Stuart-Fox, 2005). The policy has consisted in important regulatory reforms oriented towards a progressive liberalization of the domestic economy, e.g. tax system restructuring, finance and trade deregulation, promotion of foreign investment, privatisation measures and creation of property rights. Concurrently, in order to facilitate the policy shift, various international donors and development agencies became involved in the making of a new legal framework. Legal reform, however, has not only concerned the economic sector and, since 1986, an army of foreign consultants – employed by institutions as diverse as the World Bank, the Asian Development Bank, United Nations agencies, the Swedish International Development Agency and the World Conservation Union – have also been involved in the promotion and codification of numerous decrees and laws relating to natural resource ownership and management.

According to Goldman (2001), this rewriting of Laos’ environmental legislation has to do with the solutions advocated and

<sup>11</sup> “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”.

<sup>12</sup> For a description of the close overlap between the LPRP and the Laotian government, see Stuart-Fox (2005).

supported by major international development agencies for solving issues of environmental degradation and poverty in the country. A prevailing view in organizations like the World Bank and the ADB is that large capital projects such as hydroelectric dams and large scale plantations represent highly valuable means not only for increasing government revenues and bringing economic development in poor regions but also for providing poor populations with new livelihood options and, hence, diverting them from imposing excessive pressure on natural resources. In turn, these large scale projects require laws for establishing certain property rights (on land, water, forests and infrastructures) and regulations for preserving the public image of the promoters (e.g. resettlement schemes, compensation measures). Indirectly, thus, the 'downward spiral' model of land degradation and poverty represents once again a guideline for law and policy making.

Another explanation for the existence of a general consensus on the national land degradation 'issue' probably lies in the respective interests that Laotian government and foreign development agencies have to collaborate. 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 Laos' 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 revenues 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. In fact, 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 Guégan 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" (Guégan, 2005, my translation).<sup>13</sup> Therefore, more than a bilateral agreement, the relationship between the government and their international development partners can be compared to a 'coalition' of powerful actors, gathered by converging interests. Yet, as mentioned above (Implications for policy), such a 'coalition' does not necessarily benefit the development of the country as a whole. As argued by various studies cited throughout this paper, it 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 are termed 'the state', 'the political elites', 'upland populations' and 'international development agencies' and, by employing these broad categories of actor, the analysis runs the risk of suggesting a somewhat schematic vision of environmental politics. 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 this analysis is that Laos' environmental assessments are marked by a significant level of uncertainty. The official environmental discourse appears thus less based on hard empirical evidence than inspired by two narratives – 'chain of degradation' and 'downward spiral' of poverty and land degradation – that have been strongly disputed in a wide variety of contexts. Instead of being a source of controversy, however, these two narratives appear to be objects of a general consensus between the Laotian authorities and major international development agencies.

In turn, they have important consequences for policy making. For instance, by representing deforestation as a major threat to both upland and lowland environments and economies, the 'chain of degradation' narrative has directly influenced land, forest and biodiversity conservation policy. Large conservation areas have been demarcated and land policy has generally favoured forest conservation over agricultural land use. In addition, the vision of poor and remote upland populations, engaged in subsistence, yet unsustainable farming activities and embarked on a 'downward spiral' of land degradation and poverty that feeds the 'chain of degradation' has provided incentives for the resettlement of remote communities in more accessible areas, closer to markets and state services. Similarly to what has been described in Thailand and Vietnam (e.g. Vandergeest and Peluso, 1995; Vandergeest, 1996; Buch-Hansen, 2003; Sowerwine, 2004), these various political measures contribute to facilitate the effort of the state for assigning the 'right place' to the people and their activities.

To some extent, however, behind the official discourse on land degradation and the national objectives of environmental preservation, socioeconomic development and nation-building, rural development policy reflects also the particular worldviews and interests of policy makers and political elites. Indeed, besides 'traditional' state concern for territorialisation, governing the uplands is also a matter of securing key sources of revenues (i.e. forestry, lowland agriculture and hydropower) and policing potentially subversive remote populations. For the national elites (generally ethnic Lao and more familiar with the lowland context), mainstream environmental discourse and rural development policy can also represent valuable means to justify and expand one's political and economic influence over upland resources and peculiar ethnic minorities. For international development actors, asserting the existence of critical land degradation and poverty issues represents the insurance that their presence and activities will not be contested and, not least, will continue to be sponsored.

As pointed out by Warren, "land degradation cannot be judged independently of its spatial, temporal, economic, environmental and cultural context" (2002, p. 449). Rather than 'absolute truths', land degradation assessments may be considered as projections of environmental change through two superimposed lenses: a technical one, i.e. the spatio-temporal scales and technologies of observation – and a social one – i.e. the sociocultural values and concerns of the assessor(s). Through these two lenses, land degradation becomes a relative and dynamic notion. This simple observation raises important questions for environmental research and policy. For researchers, the main question is thus: How should we deal

<sup>13</sup> "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".

with these conflicting views and positions? For policy makers, the question is: Should the more powerful always have the last word or is there a 'middle way' for solving with this kind of conflict in a democratic and sustainable manner?

With 'narrative analysis', Forsyth and Walker (2008) suggest a starting point to address these questions. As they advocate, "a more politicized account of how environmental knowledge is formed is necessary before assuming that it provides an accurate basis for explaining environmental problems or for indicating appropriate regulatory responses" (Forsyth and Walker, 2008, p. 228). What is needed, therefore, is the recognition that environmental knowledge is neither socially nor politically neutral. Environmental knowledge is situated by individual and collective values. In turn, mainstream environmental knowledge – sometimes established through misapplied generalization of localized or imported scientific explanations – tends to frame the arguments (and values) of those willing to participate in mainstream environmental debates. The production of environmental knowledge is also part of power struggles and wider political-economic projects. Through narratives on nature and human actions on nature, these are not only particular natural 'orders' that are defined or advocated. Particular social arrangements are also judged or promoted. Environmental narratives – like the upland 'downward spiral' and 'chain of degradation' above – position social actors relative to both nature and each other. Hence, some are judged as 'villains' and blamed for environmental degradation, while others are judged as 'victims' or 'wise environmental managers'.

On the basis of this acknowledgement of the politicization of environmental knowledge, building democratic and sustainable environmental policy would require a more inclusive, critical and scientifically informed approach to the various claims, narratives and counter-narratives of the actors involved in, or concerned with the environmental debate(s). In other words, ways forward may be found not only by improving the scientific grounds on which environmental assessments are based but also by facilitating the participation of marginal actors in the assessment of socio-environmental issues and the definition of their solutions. In this regard, it must be noted that Laos presents some signs of overture. As presented above, the official discourse on land degradation 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-centred' 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.

Thus, even if the fundamentals of the upland 'issue' have not been entirely reconsidered, there is an important paradigm shift regarding the advocated solutions to land degradation and poverty in the uplands. Furthermore, recent policy and institutional developments suggest that this shift is now starting to turn into practice. Indeed, following official statements regarding the potentially negative outcomes of land reform (see Land zoning and land use regulation), LUPLA is now actively reconsidered by the Laotian authorities. The rate of implementation of the LUPLA has significantly decreased since the early 2000s—from 1300 villages per year during the 1995–1999 period to some 300 villages per year since 2002 (GoL, 2005). At the same time, experiments are cur-

rently being conducted by the new National Land Management Authority, in cooperation with international development agencies (e.g. AusAID, GTZ), in order to improve the land reform and, importantly, make it more participatory. In the end, there are prospects for policy interventions that are not entirely based on views from the lowlands and uncontextualized 'scientific' knowledge but that also account for the perspective and concerns of the hill people.

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