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Augmenting Missing Linkages:

Conservation and Community Resource Management in Lao PDR

ABSTRACT

Sustainable forest management has been placed at the centre of forest policy in the Lao People's Democratic Republic (hereafter Laos) since 1989 following the First National Conference on Forestry that addressed increasing forest degradation as a national concern. In the last two decades organisational structure of the Lao forest management authority and the rapid institutionalisation that followed shaped forest management in Laos. Technical and financial support provided by international organisations in the early 1990s particularly facilitated reclassification of forest areas based on scientific criteria and delineation of new resource boundaries, including national reserve forests for biodiversity conservation. This was accompanied by the development of legislative statutes that prescribed forest resource use and management. Together, these efforts defined state, community, and private resource tenure over land and forest in Laos.

In the pursuit of improved forest management, the government of Laos recognised customary resource access and encouraged local participation in resource management. This was a unique feature compared to neighbouring countries in Southeast Asia, many of which experienced political upheaval and violent conflicts between the state and local communities over issues of access and control of forest resources. Although less confrontational, the process of resource boundary delineation and designation of national reserve forests in Laos instigated a new type of resource conflict. The process increased resource scarcity in areas where customary resource boundaries overlapped with the new resource boundaries.

The main aim of this paper is to identify missing links in forest conservation in Laos. The last two decades were primarily devoted to forging an effective linkages between conservation and

development goals by devolving forest management responsibilities to local authorities. However, the efforts have been unsatisfactory as intra-organisational and intra-village linkages remain weak, and conservation policy lacks consistency. In this paper, I will review the development of conservation policy and the creation of national reserve forests in Laos. In the process I will examine the way local forest resources were incorporated into national reserve forests, and the way the new conservation policy has affected customary resource use. Furthermore, I will examine community responses to new resource boundaries based on a case study in northwest Vientiane that investigates whether decentralised forest management had strengthened or disintegrated community control over forest and its resources.

Key words: Community resource management, decentralisation, protected areas, conservation

I. FOREST CONSERVATION IN LAOS

Forest management in Laos evolved through a numbers of stages over the course of history: From a period under the rule of local lords to a period of open access forest, then through a period of state consolidation, and to the current period of decentralised forest management. Changes in forest management occurred concurrently as the importance of forest changed through these historical periods. At times, the forest served as a reservoir of natural resources, a buffer, a natural boundary, and a refuge. It also produced wealth, as timber and other forest products became important economic resources for landlocked Laos. Thus, forest management has been shaped by changes in various factors including social, political and economic factors. The current paper reviews the way forest conservation was shaped in Laos by reviewing forest conservation policy of the last two decades. In particular, it will focus on the development of protected areas, which is a new form of forest management, and how it was delivered by the central and local governments. The paper elucidates the existing gap between policy and local perceptions of forest. It also points out the missing linkages between the theory and practice of protected areas management.

Forest Conservation in Laos: 1980s and 1990s

While the need for environmental protection and biodiversity conservation was suggested by a number of foreign experts during the 1970s, it was not a high priority of the government until the 1980s. Ecological values of forests began to take precedence in government policy in the late 1980s with the first forest reconnaissance survey being conducted in 1989 by the National Office of Forestry Inventory Programme (NOFIP). NOFIP classified forest cover and land use across Laos, and compared changes between 1982 and 1989. The results of the survey indicated a trend of forest loss and forest degradation in Laos (Manivong and Sandewall 1992). This convinced the government to regulate shifting cultivation practices in the uplands and to control commercial logging practices.

In the meantime, increased global awareness of tropical forest degradation had united international agencies to promote an international agreement, the Tropical Forestry Action Plan (TFAP). TFAP was developed jointly by the Food and Agriculture Organisation (FAO), the World Bank and the World Resources Institute (WRI). It aimed to introduce “multi-disciplinary sectoral planning approaches at the national level to encourage the formulation of effective policies and programmes (Kashio 1994, p2-3).” In the case of Laos, the development of TFAP

was co-funded by FAO, ADB, SIDA, and the World Bank (Ministry of Agriculture and Forestry 1990) in order to prioritise natural resource conservation in the national policy.

Sustainable use and management of forests thus climbed up in Laos's national agenda in the early 1990s. In order to implement the new government policy on sustainable forest management, forest areas were classified and zoned according to the new classification identified by NOFIP. This included delineation of forests such as state production forests and national reserve forests. National reserve forests, or *pā sagan haengxāt* in Lao was established in 1993 under the Prime Minister Decree No. 164. The government designated 18 sites, covering nearly 12 percent of the national area. While the definition of national reserve forest was hardly defined from the definition of protected area developed by the World Conservation Union (IUCN), it was area category of forest given the highest priority in environmental conservation by the national government (Southammakhot 2001). It is sometimes referred to as the National Biodiversity Conservation Area (NBCA) because the purpose of the national reserve forest is to protect biodiversity and culture, as well as the scientific value of the resources.

The Decree No. 164 was the first government statute that identified the geographic location of reserve forests in Laos, and prohibited local people's interventions including swidden cultivation, logging, hunting, and mining in the newly designated reserve forests. While the highest priority was placed on the conservation of biological resources, national reserve forests were also established for cultural preservation and national security reasons. In the meantime, the boundaries of national reserve forests were only drawn arbitrary. This meant that the actual area of national reserve forests was open to interpretation. For instance, Table 1 indicates discrepancies in the size of national reserve forests based on different sources of information. With a total of 20 national reserve forests, the minimum estimate of the national reserve area today is approximately 12 percent of the total national area. Table 1 indicates that over the last decade the size of national reserve forest has changed quite significantly exemplifying the obscure nature of resource boundaries despite their legal definition.

Management Structure of Conservation Forests

Following the designation of national reserve forest, management of the national reserve was entrusted to the Centre of Protected Areas and Watershed Management (CPAWM) at the Department of Forestry (DoF). This was a new government office that was established following the organisational restructuring that took place immediate after the signing of the

Tropical Forestry Action Plan (TFAP). CPAWM became in charge of national reserve forests and watershed protection across the country in Laos. It quickly gained importance within the Department, as international organisations focusing on forest management sought collaboration through CPAWM. For example, Table 2 illustrates that out of 20 national reserve forests 18 sites received international support during the period between 1990 and the early 2000.

According to Robichaud et al. (2001), international support of forest conservation in national reserve forests during the first half of the 1990s was essentially focused on identifying the ecological value of each site. Forest classification and wildlife surveys were conducted in national reserve forests across the country to identify the areas with high conservation value. International organisations such as the IUCN played a key role in identifying the national reserve forests on the basis of forest cover (Berkmuller et al. 1995). Meanwhile, organisations such as the Wildlife Conservation Society (WCS) and the World Wildlife Fund (WWF) conducted wildlife surveys in various national reserve forests.

During the mid 1990s, programs supported by organisations such as Swedish International Development Agency (Lao-Swedish Forestry Programme, LSFP) and the World Bank (Forest Management and Conservation Programme, FOMACOP) began to initiate integrated conservation and development projects in national reserve forests. While this had been the general trend in protected areas management, this was the beginning of participatory forest conservation in Laos.

In 1999, DoF was reorganised once again, which dissolved CPAWM. A new division, Division of Forest Resource Conservation (DFRC), was established at DoF which provided technical services for forest conservation. Technical services for protected areas were then provided through the National Reserve Forest Unit in DFRC. Organisational restructuring in 1999 was also accompanied by transfer of management responsibilities to the Provincial Agriculture and Forestry Office (PAFO) and the District Agriculture and Forestry Office (DAFO). It was a form of deconcentration or decentralisation of administrative tasks to the local offices, in this case district offices, to facilitate conservation activities in villages. As a result, people from the central office were transferred to the local government offices. At the same time, completion of international projects in the late 1990s had gradually minimised the concentration of resources and power at the DoF. Faced with limited resources, reprioritising national reserve forests according to their ecological, economic and management values became a priority in forest conservation.

II. DEFINITION OF CONSERVATION

Legal Definition

The legal status of *pā sanguan hēngxāt* or national reserve forest is not clearly articulated in Lao legislation. Meanwhile *pā saguan*, or conservation forest, is one of the five official forest categories which is defined in Article 18 of the Forest Law as “forest and forest land that is delineated to conserve wildlife species, plant species and others that bear historical, cultural and environmental value as well as value for tourism, and scientific research” (translation by the author). Other forest areas include *pā pongkan*, for watershed protection, *pā feunfu* for forest regeneration, *pā somsay* for household use of timber and forest products and *pā xutsom* or degraded forest, which can be allocated to individual households. Under the new legal classification, logging and use of forest products are prohibited in *pā pongkan*, *pā feunfu* and *pā saguan*, where as forest use by individuals is permitted in *pā somsay* and in *pā xutsom*. However, none of these forests can be legally converted to non-forest land unless permitted by the authorities in charge, thus indicating a strong emphasis of the Forest Law on forest protection and conservation.

The Forest Law further stipulates the need to distinguish *pā saguan* into three distinctive zones (Article 42) to safeguard the protection of biodiversity and ascetic values of natural resources. The Article suggests further distinction into Totally Restricted Zone (or Absolutely Prohibited Zone), Controlled Use Zone (or Management Zone) and Corridor Zone (Linking Zone). Under the Article, resource access and use is severely restricted in the Totally Restricted Zone, while the Controlled Use Zone allows limited access and use of resources. Access to and use of resources in the Corridor Zone is also restricted in order to secure passages between habitats for wildlife. The kind of zoning suggested is somewhat similar to the idea of buffer zone management, which creates areas of forest within a protected area for local access and use (Berkmuller et al. 1995). However, the Forest Law does not clearly stipulate whether the buffer zone approach is applied at all levels of *pā saguan*. Moreover, neither the Decree No. 164 nor the Forest Law make a clear distinction between *pā sanguan hēngxāt* and other *pā saguan* that are declared by the provincial and district agricultural offices, and villages.

On top of the legal ambiguity of *pā sanguan hēngxāt*, its actual size is uncertain. As had been shown earlier, the size of protected areas in Laos differs between the figures recorded in Decree No. 164, and other figures including recommendation by an IUCN consultant Klaus Berkmuller (Berkmuller et al. in 1995), and the more recent assessment in the protected areas fact sheets

prepared by the DFRC.

Local Definition

Studies on local knowledge of resources point out the differences between scientific and legal classifications of forests and land, and the ways in which local people define forests and land in their villages (Fairhead and Leach 1996; Ganjanapan 1996; Fujita 2000). For example, based on his fieldwork in northeast Thailand, Fujita (2000) observed that the farmers perceive their forest and land as continuous landscape. On the other hand, legal classification places forest and land into discontinuous pieces. Ganjanapan's (1996) study in northern Thailand also compares the difference between local knowledge and perceptions of forest and the scientific classification of forest applied by the state. She claims that since the late 19th century, scientific classification of land and forest was used and applied particularly by the state, taking supremacy over traditional knowledge of forest and land in the rural areas. In the process, the blame for environmental degradation was often cast upon the local people. A similar claim is made by Fairhead and Leach (1996) who studied competing narratives on environmental change in Guinea. They contend that technical perspectives on environmental change often disregard local history and knowledge, as well as the ways local people have been interacting with their natural environment (Fairhead and Leach 1996).

In rural villages of Laos, there are various ways in which local forests are distinguished (Ireson 1997, Namura 1998). Densely forested areas are often referred to as *pā dong* or *pā dong dip* particularly among the Tai-Kadai ethnolinguistic group. Secondary forest which is also a swidden fallow is called *pā lao* which is can be further distinguished into *pā lao ōn* and *pā lao kae*, or young and old swidden fallow. Bamboo and shrub dominant forests are called *pā mai phai* and *pā khok* respectively. Villages also have areas of sacred forest and forest areas for cremation and ancestral worship that are recognised as *pā saksit* and *pā xā*. These local definitions of forests also differ between ethnic groups. As Fujita (2000) studied in northeast Thailand, forest is often perceived as a part of a continuous village landscape. The local distinction for forests is thus elusive and dynamic. It also does not have a clear linear boundary. For example, *pā lao* can be converted into swidden fields according to the needs of villagers. At the same time, it can remain as a swidden fallow and a regenerating forest for periods of time depending on local villager's need for land use.

Based on his study of the upland farming system in northern Laos, Pravongviengkham (1997) notes that swidden-based farming systems in Laos emphasise shifting of land rather than

crops. This means that shifting cultivation involves rotational use of forest and fallow for production of rice, and supplementary crops including maize, chillies and other crops. Upland farmers often select their swidden field depending on various conditions including vegetation of the land. According to Pravongviengkham (1997), the first choice of swidden among the upland farmers is an area of relatively dense forest (both primary and secondary). This is followed by areas of forest which they call *yā kiew* (*Eupatorium Odorata*). Bamboo and other degraded forests are the third choice among the farmers while grass land infested by *Imeprata* is the last of all choice. Again, this signifies that in areas where farmers are cultivating swidden fields, village forest and land use is dynamic, as villagers respond to changes in population density, environment, and socioeconomic conditions. However, it is not only an individual response but a community response, as village regulatory system functions to adjust land and forest use practices of the local farmers (Pravongviengkham 1997, Roder 1997).

III. LOCAL RESOURCE ACCESS AND MANAGEMENT IN PROTECTED AREA

Limited Access

Following the designation of national reserve forest or *pā sanguan hēngxāt*, areas of forest were carved out from village territories as state property. As noted in the previous section, the Prime Minister Decree No. 164 restricted human access to forest and resources in the national reserve forests. This meant that villagers located in the new national reserve forests were no longer allowed to enter the forest to access forest. Restricted access to forest resources in national reserve forest was further reinforced by implementation of the Land and Forest Allocation Policy (LFA), which delineated village boundaries and categorised village resources into land use zones. LFA or *kān beng din beng pā* thus distinguishes village boundaries, and categorises village forests and lands into legal classifications stipulated in the Forest Law¹. While LFA includes a process of developing a village resource management plan and rules for resource use, its principal emphasis is protecting forests and forest resources.

Village boundary delineation and zoning affected the ways resources were used between neighbouring villages, and how people accessed different resources within the village. First of all, by delineating village boundaries and developing village-based management rules, resource use was restricted to members of the village. This meant that villagers no longer shared

¹ Towards the late 1990s, it became known as *kān mōp din mōp pā*, which emphasises the allocation rather than the zoning.

boundaries and resources in areas between villages. Instead, resources were allocated to each village and the management of forests was now appointed to the village authority. While this strengthened village claims over resources in some villages, not all villages located in national reserve forests responded to the situation in the same manner. While villages with sufficient access to agricultural land in the lowlands were relatively more cooperative, villages with limited access to agricultural land and limited alternative livelihood opportunities expressed ambivalence towards the new resource management structure that decreased their access to swidden fields. For instance, the study of a national reserve located in northwest Vientiane indicated that reinforcement of the national reserve forest boundary through LFA in relatively old villages was less problematic compared to relatively new migrant villages without access to productive agricultural land in the lowland.

Secondly, zoning through LFA fixed village forest and land use, also influencing households differently depending on the types of resources they used. While land use classification introduced by LFA caused only minor impacts on households with access to sufficient area of lowland agricultural land, households whose mainstay was shifting cultivation and collection of non-timber forest products were often negatively affected by the new land use classification, particularly because LFA restricted the expansion of swidden field. In some instances, households out-migrated from their villages as a result of resource constraints.

Management of Local Resources

Following the land use classification, villages developed management plans and rules in collaboration with the district authorities. Once the resource management plan was approved by the local authority, villages were responsible for implementing the plan accordingly. A study conducted in Phou Phanang indicated more than 60 percent of 40 villages (27 villages) had delineated new village boundaries following LFA and had developed some kind of management plan. However, only 16 villages assigned members of their village to manage their village forests. Furthermore, only 8 villages informed that they had clear rules that prohibited the use of resources in protected areas, was and were agreed on by members of their village. The situation leaves us to consider the effectiveness of new resource management.

For instance, villagers in Phou Phanang continued to enter forests on a daily basis to collect food products and hunt for wildlife species, conduct shifting cultivation and cut timber from the forest. While the formal response of villagers during a group interview refers to the new village boundary, both male and female villagers in villages surrounding Phou Phanang National

Reserve Forest were observed to be collecting food products on a daily basis for self-consumption and for sale. While villagers appeared reluctant to discuss the issue during a formal village interview, shifting cultivation and logging also persisted in Phou Phanang.

IV. MISSING LINKS IN MANAGEMENT

Management Vacuum

Although the official boundary and regulations for local access to forests in national reserve forests were agreed at the village level, they were hardly sufficient to safeguard conservation in national reserve forests. Several reasons are listed for the cause of ineffective conservation efforts. First, lack of clarity over the actual resource boundary inhibited effective management of forest and its resources. Not only does the interpretation of national reserve forest differ among organisations, but there is also a significant difference between the scientific definition of forest boundary, and villagers' own sense of resource boundaries. For example, a case study in Phou Phanang conducted by Thongmanivong and Fujita (forthcoming) indicated that villagers' perceptions of village boundaries covered a far greater area than the legally recognised boundary. This has led to the creation of ambiguous land where the national reserve forest is state property according to legal statutes, but in practice remains in use by the local people on a *de facto* basis.

Secondly, a management vacuum is created when stakeholders and their involvement in the management process are not identified clearly. While the importance of involving local stakeholders in the management planning process had been addressed by a manual on protected areas management (Southammakhot et al. 2001), it is still difficult for local authorities to implement forest conservation in national reserve forest that comes from their own initiatives. For example, in Phou Phanang, stakeholders and their roles were never clarified from the start of its establishment as a national reserve forest. Moreover, local authorities' limited resources led to a transfer of management responsibility from the Ministry of Agriculture and Forestry to the Ministry of Defence. The transition occurred without a clear discussion and consensus on the role of each stakeholder. This also meant that management plans were often difficult to enforce.

Thirdly, uncertainties of stakeholders and their roles meant that the objective of managing national reserve forest were often not shared among the various stakeholders. Again, referring to a case in Phou Phanang the lack of clear management objectives and information sharing left

Phou Phanang's management open to interpretation by different stakeholders. Combined with an inability to enforce resource management in the national reserve forest, Phou Phanang soon became a management vacuum in which no stakeholder took responsibility.

Stakeholders and Incentives

What then are the incentives or disincentives of different stakeholders that lead to effective or ineffective forest conservation? Again referring to the case of Phou Phanang, the new conservation approach excluded villagers' from access to resources, but without providing tangible benefits to them. The current conservation policy for Phou Phanang asks villagers' to forfeit their potential individual benefit for a long-term community benefits in the future. Villagers' present value of resource use is high, not because they are aware about the future ahead of them, but for the opposite reason. While access to resources is an important part of their daily livelihood, villagers are also far from knowing future circumstances of resource use. Given the economic and political uncertainties experienced during their own lifetimes, villagers' as individuals are often wary of making long-term investments that are intangible with their own lifetimes. There is little personal reward for joining forest conservation or tree planting, which requires long gestation periods. Lack of alternative economic opportunities and weak enforcement mechanisms also lure villagers toward resource extraction rather than conservation.

At the collective level, conservation efforts may materialise when villagers realise the loss of their resource base that affects all class of villagers. This includes incidences such as degradation of water sources and other types of natural resources that equally affect local people. It is a phenomenon Shigetomi (1996) notes as a creation of new commons. In the case of Phou Phanang, forest resources degraded rapidly over the course of last three decades. This provoked some villages in Phou Phanang to regulate how resources were extracted, such as rattan and timber, in order to maintain species and to protect water sources. However, these efforts have not been scaled up to generate a strong sense of awareness across Phou Phanang to conserve its biodiversity.

Among the local resource managers, the current management also offers little incentive for conservation. Current management of national reserve forest does not offer any tangible benefit to the resource managers and their offices. On the other hand, resource managers often gain more from logging than from conservation, particularly when conservation efforts are not gaining international interest and financial support. This inhibits the enforcement of resource

management, as well as development of trusting relationships with the local villagers. As a result, the notion of forest conservation becomes superficial, and not well attuned to local circumstances.

As for the national policy makers, there is a high incentive to protect the country's valuable natural resources, and to encourage their sustainable use. However, conservation in Laos has been swayed by global environmental politics. International pressures to agree to the TFAP had particularly encouraged the Lao government during the early 1990s to develop conservation policies. This was also supported by international aid throughout the 1990s. With a dwindling source of international support, it has become a challenge on the part of national policy makers to identify the management value of national reserve forests including the biodiversity value, and economic value.

V. AUGMENTING MISSING LINKAGES

Based on the review of recent conservation efforts in Laos, few approaches can be undertaken to augment the missing linkages. First of all, the new notion of resource management needs to incorporate local resource use and management practices. As new state resource boundaries often overlap with customary resource boundaries, the ways in which local people have been using the resources needs to be better understood rather than bypassed by imposing a new boundary based on scientific classification.

Secondly, there is little incentive to protect forest resources for the local communities under the current policy that excludes local people from forest areas. Neither does the conservation offer tangible benefits to local resource managers. For both local resource users and managers, resource extraction offers immediate benefits, as opposed to conservation. It is thus essential to think beyond mere restriction of access and control of conservation areas. It is also insufficient to transfer management responsibility without redistributing tangible benefits deriving from conservation.

This brings us to the third point of identifying key stakeholders in conservation and clarifying their roles from the first stages of management planning. It is significant that management objectives of conservation forest are shared among the various stakeholders involved in the management of national reserve forest. However, the objective of conservation should not only echo the goals proclaimed by international organisations and national agencies, but must be linked to existing local efforts to manage resources.

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Table 1. Protected Areas in Laos

Unit: square km

Protected Areas	Decree No.164 (1993)	Berkmuller et al. (1995)	Protected Areas Fact Sheets (Draft, 2001)
Dong Ampham	2,000	1,975	1,699
Dong Houaxao	1,100	910	947
Dong Phou Vieng	-	-	1,745
Hin Namno	820	865	750
Nam Et	1,700	1,915	2,144
Nam Ha	690	445	1,118
Nam Kading	1,690	1,740	1,442
Nakai Nam Theun	3,532	3,710	3,058
Nam Phouy	1,912	1,150	1,516
Nam Xam	700	580	651
Phou Din Daen	2,200	1,310	1,592
Phou Hinphoun	1,500	1,580	2,029
Phou Khao Khouay	2,000	1,390	1,608
Phou Louy	1,500	1,465	1,302
Phou Phanang	700	-	580
Phou Xang He	1,099	1,060	993
Phou Xieng Thong	1,200	995	879
Xe Ban Nouan	1,500	1,260	1,084
Xe Pian	2,400	2,665	2,173
Xe Xap	-	-	1,283
Total	28,243	25,015	28,593

Table 2 Protected Areas and Donor Support

Protected Areas	Provinces	Supporting Organisations	Duration of Support
Dong Ampham	Attapeu, Xekong	WWF	1999-2000
Dong Houaxao	Champassak	BCP, GAA	1996-2000
Dong Phou Vieng	Savannakhet	FOMACOP	1996-2000
Hin Namno	Khammouane	WWF	1999-2000
Nam Et	Houaphanh	DANIDA, IUCN	1999-2001
Nam Ha	Luang Namtha	WCS	1995-present
Nam Kading	Bolikhambxay		
Nakai Nam Theun	Khammouane	World Bank	1996-2000
Nam Phouy	Xayabouri	LSFP	1993-2000
Nam Xam	Houaphanh		
Phou Din Daen	Phongxaly	EU	1999-2004
Phou Hinphoun	Khammouane	FOMACOP	1996-2000
Phou Khao Khouay	Bolikhambxay, Vientiane, Xaysomboun	LSFP, ADB	1993-2000
Phou Louy	Luangprabang, Houaphanh	DANIDA, IUCN	1999-2001
Phou Phanang	Vietiane	Canada Fund	1996-2000
Phou Xang He	Savannakhet	LSFP	1994-2000
Phou Xieng Thong	Champassak, Saravanh	BCP, GAA	1996-2000
Xe Bang Nouan	Saravanh, Savannakhet	LSFP	1993-2000
Xe Pian	Attapeu, Champassak	FOMACOP	1996-2000

Source: Department of Forestry (2000)