

Participatory Forest Management: a Research Study in Savannakhet Province, Laos

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Abstract: In accordance with the vision set out by Agenda 21 at the 1992 United Nations Earth Summit, the government of the Lao People's Democratic Republic (Lao P.D.R.) has been pursuing plans and policies aimed at environmentally sound and sustainable socio-economic development in Laos. Strategically, while poverty alleviation is its highest priority, for the foreseeable future at least, development will continue to be driven by natural resource use. It is therefore of the utmost importance that this is done sustainably and equitably, in order to satisfy the government's dual aims of improving citizens' livelihoods while maintaining ecological integrity. The economy is still largely dependent on just a few industries, relying heavily on the country's natural resource base, with agriculture and forestry accounting for 52.1 percent of gross domestic product (GDP) in the late 1990s. Mainstays of the national economy continue to be crop production, livestock, fisheries, forestry, and hydroelectricity. The basic focus of this study is to examine the government's policies in terms of forest management and conservation as well as poverty alleviation. There are five elements of this process which must be considered: (1) reforming the structure of the Provincial Agriculture and Forestry Office (PAFO) and the Provincial Forestry Office (PFO) based on decentralization, (2) rural development projects, (3) land and forest allocation program, (4) national biodiversity conservation areas, and (5) the stabilization of shifting cultivation practices. Data were collected for this study from PAFO reports as well as from its staff that have worked closely in the target fields. Based on the data collected, key points of the research study describe in detail some of the concerns about the current status of natural resource conservation and management and the problems to be solved. Finally, the paper outlines what could be an appropriate process of forest management and conservation, based on the participation of local people in Savannakhet Province.

Key Words: Structural organization of PAFO and PFO in Savannakhet Province, Rural development project, Land and forest allocation program, National biodiversity conservation areas, Stabilization of shifting cultivation practices.

1. General description of agriculture and forests in Savannakhet Province

Savannakhet is a province in Laos, located in the southern part of the country and lying between 16° to 17° north latitude and 105° to 106° east longitude. Its total area is 21,774 square kilometers, and in 2000 it had an estimated population of 757,950, with an average population density of 35 persons per square kilometer (Department of Planning 2000). Approximately 75 percent of the total population belongs to the *Lao Loum* ethnic group, with most of the remainder belonging to the *Lao Theung*. The topography varies from the low-lying floodplains of the Mekong River to the foothills and mountains of the Annamite chain. Annual rainfall averages approximately 1,440 millimeters per year, with rainfall in the eastern uplands substantially higher than in the lowlands, but periodic droughts and flooding are common.

Agricultural production is the primary activity in the province, and rice is the most important crop. According to the government's policy, the agriculture and forestry sectors are the most important to national economic de-

velopment because they are responsible for carrying out five government aims, as follows (PAFO 2002):

1. Economic reform towards a market-oriented economy
2. Water resources maintenance
3. Research activities
4. Shifting cultivation stabilization
5. Human resources development

Currently, Savannakhet Province has an estimated 116,809 hectares of rain-fed rice fields and 19,801 hectares of irrigated rice fields, which produce enough rice for both domestic consumption and for sale on the market. The situation is similar with other agricultural activities. For example, the number of domestic livestock being raised is increasing steadily, and presently there are seven buffalo and cattle farms, 79 pig farms, 19 poultry farms, 15,924 man-made fish ponds, and 259 natural fish ponds (PAFO 2002).

Savannakhet is also a province rich in forest resources; in 2000 it still had approximately 70 percent forest cover and included three national biodiversity conservation areas (NBCA): Phou Xang He (109,900 hectares), Dong Phou Vieng (197,000 hectares), and Xe Bang Noun (150,000 hectares). In terms of the economic aspect, there are two state production forests in the province: Dong Ka Pho (9,600 hectares) and Dong Si Thounh (212,000 hectares) (MAF 2001).

In Savannakhet, there has been a loss of "richer" forest

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types and overall forest area and a consequential gain of poorly stocked areas in terms of quality and quantity of tree and bamboo species. The following changes in land use and vegetation type were observed between 1982 and 2000 (see Table 1 below).

1. High-quality forests declined by 11 percent, from 1.214 to 1.075 million hectares.
2. Poorly stocked forests increased by 3 percent, from

0.696 to 0.716 million hectares.

3. Overall increase in forest area of 6 percent, or 119,000 hectares.
4. Agricultural areas increased by 59 percent, or 113,000 hectares.
5. Urban areas increased by 29 percent, or 4,000 hectares.

Table 1. Area distribution in Savannakhet Province by land use and vegetation type, 1982, 1990, and 2000 (in thousands of hectares).

Land use / vegetation	1982	1990	2000
Dry dipterocarp	591	631	641
Lower dry evergreen	13	4	3
Lower mixed deciduous	168	134	66
Upper dry evergreen	20	36	28
Upper mixed deciduous	409	388	330
Gallery forest*	13	10	4
Mixed coniferous/broadleaves	0	0	0
Coniferous	0	0	0
Plantations	0	0	3
Total high forest**	1,214	1,203	1,075
Bamboo	82	57	9
Unstocked/poorly stocked	375	535	598
Shifting cultivation	31	33	58
Total potential forest	488	625	665
Savannah/open woodland	189	19	38
Heath and scrub forest	19	13	13
Total other wooded areas	208	32	51
Sub-total all forest areas	1,910	1,860	1,791
Rice paddy	170	225	285
Agricultural plantation	1	0	0
Other agricultural land	1	0	2
Grassland	15	18	20
Agricultural land	187	243	307
Urban and infrastructure	14	16	18
Barren land/rock	4	3	3
Swamp	3	3	3
Water	22	15	18
Total other land	43	37	42
Total all land	2,140	2,140	2,140

Source: JICA/SIDA and NAFRI (2000).

Note: * Gallery forest is forest located above/around a river.

** High forest is high-density forest.

2. Reforming the structure of the Provincial Agriculture and Forestry Office (PAFO) and the Provincial Forestry Office (PFO) based on decentralization

2.1 Structure of the PAFO

In terms of organizational structure, PAFO is responsible to the provincial governor horizontally, and vertically to the ministry of agriculture and forestry, and there are six provincial assistance offices under it: the executive office, livestock office, irrigation office, cultivation and extension office, meteorology office, and the forestry office. In order to carry out agricultural and forestry production, PAFO

also has local offices in each district called the District Agriculture and Forestry Office (DAFO).

Generally, PAFO is a strategy unit for agricultural and forestry production, and its role is to seek out possibilities to decentralize planning and budgeting to DAFO. Nowadays, each DAFO is responsible for implementing agriculture and forestry practices in villages in its district.

As the structure of PAFO and DAFO is the same, the differences between them depend on their actions as well as responsibilities.

2.2 Structure of the PFO

Horizontally, the PFO is responsible to PAFO, and vertically, it is under the Department of Forestry (DoF). The PFO has its own technical assistance units, one each for plantation, protection and conservation, inventory,

executive functions, international check-posts, land-use planning and shifting cultivation stabilization, and forestry management. The PFO also has district forestry units (DFUs); in Savannakhet Province there are 15.

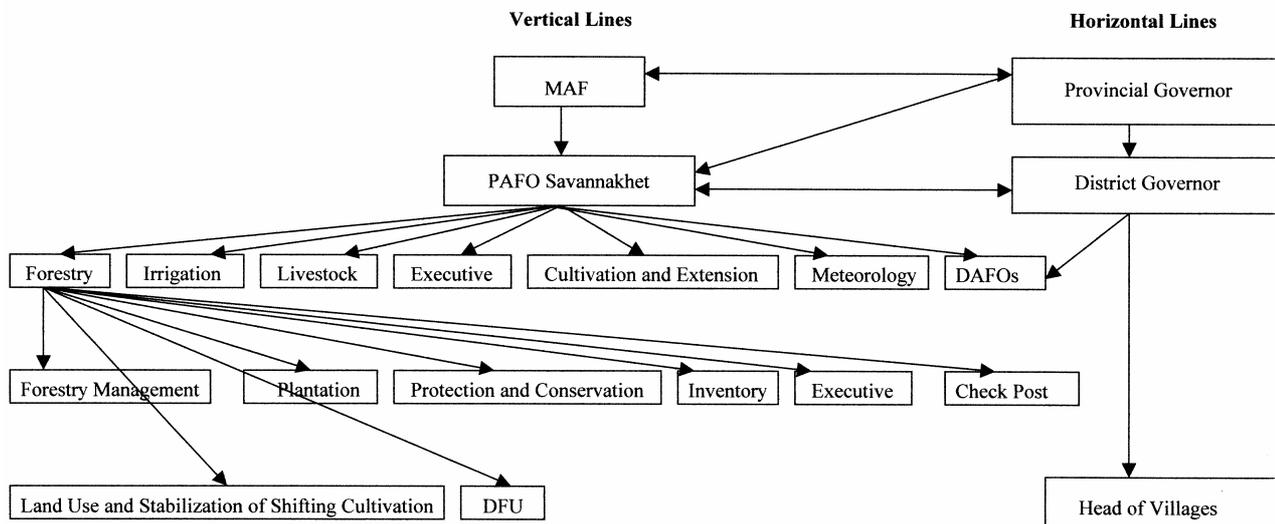


Figure 1. The structure of the Provincial Agriculture and Forestry Office and Provincial Forestry Office based on decentralization.

(Prepared by author)

3. Ongoing forest-related projects and activities in Savannakhet Province

3.1 Rural development project

The government of Laos has a history of emphasizing action for increasing the well-being of the country's rural people, and it established special zones for this purpose in 1995. In the province of Savannakhet there are four provincial special zones and six district special zones. These were created to increase the well-being of rural people, reduce the gap in poverty between the district and more remote areas, distribute information and useful materials to rural people as well as those living in districts or towns, and to build rural infrastructure such as schools, hospitals, roads, offices, etc.

Currently, PAFO is responsible for rural development projects, in cooperation with other government agencies (public health, education, industry and handicrafts, road construction, etc.) as well as external supporting organizations (CIDSE, OXFAM, Action North Sud, etc.).¹

Annually, PAFO proposes plans and budget estimates to the provincial governors and external supporting organizations in order to undertake agriculture and forestry activities in the special zones. Some agricultural and forestry activities, such as land and forest allocation and stabilizing shifting cultivation practices, are implemented in the rural development projects, particularly in the special

zones. This means that land and forest allocation as well as stabilizing shifting cultivation practices are two of PAFO's activities that must be conducted both inside and outside of the special zones.

Basically, the provincial and district special zones share the same rural development concept. Provincial special zones are established as the first part of the rural development program, where provincial and district staff from related government agencies conduct activities directly with village organizations and rural people. Then the activities in the district special zones are followed-up on by district government staff after learning from the lessons and experiences in the provincial special zones.

3.1.1 Provincial special zones

➤ **Atsaphone District:** Phonh Am provincial special zone

Located in the northern part of the district, and consisting of 13 villages with a population of 6,622 people.

➤ **Xepon District:** Lago provincial special zone

Located in the eastern part of the district, and consisting of 14 villages with a population of 6,611 people.

➤ **Vilabouly District:** Angkam-Namchalo provincial special zone

Located in the northern part of the district, and consisting of 16 villages with a population of 3,287 people.

¹ CIDSE (Cooperation International pour le Developpement et la Solidarite).

- **Thapangthong District:** Xeku-Phoumaly provincial special zone
Located in the northern part of the district, and consisting of 18 villages with a population of 4,851 people.

3.1.2 District special zones

- **Xepon District:** Ladho district special zone
Located in the eastern part of the district, and comprised of 23 villages with a population of 3,939 people.
- **Xonbouly District:** Tanvay-Lamthouay district special zone
Located in the eastern part of the district, and comprised of 32 villages with a population of 13,208 people.
- **Nong District:** Paloa-Asing district special zone
Located in the eastern part of the district, and comprised of 15 villages with a population of 3,264 people.
- **Phin District:** Hoay hoy-Thoun kham district special zone
Located in the southern part of the district, and comprised of 31 villages with a population of 8,518 people.
- **Phalanxay District:** Keng Cheep-Nalay district special zone
Located in the western part of the district, and comprised of 15 villages with a population of 4,080 people.
- **Saybouly District:** Xieng Kai district special zone
Located in the northern part of the district, and comprised of nine villages with population of 3,049 people.

3.1.3 Project implementation in the special zones

Similarly, both provincial and district special zones have undertaken socio-economic development activities in order to increase the well-being of rural people, including

1. enlarging rice paddy fields to replace shifting cultivation practices,
2. encouraging rural people to plant trees for wood production and fruit, and
3. programs to encourage rural people to raise poultry, cows, pigs, and buffaloes for domestic consumption and for sale to the market.

One of the results of these programs is that public health as well as children's education in rural areas have improved since the special zones were established.

3.1.4 Problems to be solved

Although the government agencies as well as related supporting organization have tried to solve problems in the rural areas, especially poverty alleviation, some cannot be solved immediately, such as the following:

- Some of the annual plans for agricultural activities, such as expansion of rice paddy fields, small-scale irrigation systems, and tools for agricultural production, have not been fully carried out yet due to insufficient

budget resources—a problem in both provincial and district special zones.

- Cooperation between provincial and district agencies and related supporting organizations is sometimes not well coordinated in both provincial and district special zones; for example, the success of an annual plan for rural development activities depends on which donor supports them.
- The availability of official staff to conduct activities in special zones is limited, particularly in the district special zones.
- People living in the special zones are often at a disadvantage because of language problems and low education levels, making it difficult for official staff to explain the concepts of rural development activities and convince them to participate. The task of government agencies working on rural development in the special zones is to modify the concept of rural development, depending on different natural conditions as well as differing ethnic groups. This means that rural development programs in the special zones may take a long time to be realized.

3.2 Land and forest allocation program

The land and forest allocation program was started in the province of Savannakhet in 1996 in order to conserve forestry resources and use them sustainably, allocate land to the landless poor people for agricultural production, and increase the well-being of rural people through appropriate extension activities (paddy rice fields, livestock bank, fruit and industrial trees plantation, revolving fund, etc.).

Basically, there are ten steps in the land and forest allocation process in a village, as follows:

1. Preparation and planning for land and forest allocation activities
2. Define the limits of the village's boundaries
3. Data collection and analysis
4. Land and forest planning
5. Decision-making on land and forest allocation by the villagers
6. Field measurement of lands and forests
7. Institution of the village's regulations on land and forest resources management and conservation
8. Conduct extension activities according to people's basic needs
9. Create a memorandum on the land and forest allocations
10. Evaluation

3.2.1 Background of the land and forest allocation process in Savannakhet Province

The land and forest allocation program in the province of Savannakhet was started in 1996 in cooperation with external supporting organizations such as SIDA and FOMACOP.² Basically, with their support, the ten steps

² SIDA (Swedish International Development Agency), FOMACOP (Forest Management and Conservation Program).

of land and forest allocation, outlined above, are conducted by district forestry staff that have gone through a training course by the DoF and PAFO.

➤ Land and forest allocation supported by SIDA

From 1996 to 2000 SIDA contributed to fund the land and forest allocation program, which was conducted in six districts (Atsaphone, Phalanxay, Phin, Xonbouly, Vilabouly, and Xephon) with a total of 36 villages. Currently, the program is being operated by the district forestry unit (DFU) with funding administered by PAFO, but, unfortunately, extension activities have not been implemented because of insufficient budgets compared to when SIDA was providing financial support. Some programs, however, are still in place in the villages where SIDA had supported land and forest allocation activities, including the rice bank, livestock bank, women's weaving association, the revolving fund, etc.

The regulation of each of these activities is different, depending on the villagers' agreement (FMPU 1993).

➤ Land and forest allocation supported by FOMACOP

FOMACOP also supported a fund for land and forest allocation from 1996 to 2000, which was conducted in two districts (Songkhone and Thapangthong) with a total of 39 villages. Although FOMACOP ended its support, activities are still operating in the target villages similar to those in the SIDA-funded villages.

In accordance with the government's forestry policy, the management of state production forests must be modified in order to become sustainable, and to assist with this goal, FOMACOP will start up again at the end of 2003. It is now in the process of preparing, discussing, planning, and training staff.

Table 2. Land use and land allocation from 1996 to 2002.

District	Total villages	Total households	1996–2001		2001–2002		1996–2002	
			Villages	Area allocated (hectares)	Villages	Area allocated (hectares)	Villages	Area allocated (hectares)
Khanthabouly	94	16,689	32	14,992.45	16	28,172.00	48	43,164.45
Champhone	170	16,375	15	2,635.04	4	2,862.55	19	5,497.59
Songkhone	142	16,005	31	23,426.23	2	2,768.60	33	26,194.83
Xonbouly	107	8,134	10	11,856.07	5	4,679.00	15	16,544.07
Thapangthong	77	5,281	27	57,991.86	5	17,320.20	32	75,312.06
Outhumphone	106	12,497	12	2,680.49	7	113.19	19	2,793.68
Atsaphangthong	61	8,448	8	6,786.85	2	456.72	10	7,243.57
Atsaphone	97	6,412	13	6,709.74	5	5,441.99	18	12,151.73
Phalanxay	78	4,892	18	33,761.77	6	8,858.64	24	42,620.41
Xayphouthong	63	7,781	17	5,607.15	2	1,573.83	19	7,180.98
Xaybouly	89	10,234	12	13,109.93	10	12,395.10	22	25,505.03
Phin	116	8,279	36	59,456.50	16	42,037.55	52	101,494.05
Xepon	160	7,640	20	35,127.80	12	19,434.85	32	54,562.65
Nong	78	3,045	24	20,781.24	13	6,589.00	37	27,370.24
Vilabouly	103	4,778	25	24,045.86	10	6,915.79	35	30,961.65
Total	1,541	136,490	300	319,268.88	115	159,628.73	415	478,596.99

Source: Land Allocation and Stabilization of Shifting Cultivation Unit, PFO (2002b).

3.2.2 Land and forest allocation from 1996 to 2002

Land and forest allocation is the most important issue in terms of forest management and conservation in the Savannakhet Province. Generally, the PFO has cooperated with the provincial land and forest allocation committee as well as external supporting organizations in setting up an annual plan to undertake the land and forest allocation program. To date, it has been completed in 415 villages, or 26.9 percent of all the villages in the province (Table 2).

3.2.3 Problems to be solved

The main problems facing the land and forest allocation program include the following:

- Incomplete projects – The land and forest allocation program was still continued in the target villages even after SIDA and FOMACOP participation ended, but could not move onto the extension step because of an insufficient budget.
- Outside encroachers – Although the land and forest allocation program has already been conducted in some villages, outsiders (from other village) still encroach on their land and forestry resources.
- Incomplete implementation – Due to an insufficient budget to undertake the program in all the villages in the province, it was carried out first in the mountainous districts as the top priority rather than in the lowland districts.

3.3 National Biodiversity Conservation Areas (NBCAs)

There are three national biodiversity conservation areas (NBCAs) in Savannakhet Province: the Phou Xang He NBCA (109,900 hectares), Dong Phou Vieng NBCA (197,000 hectares), and the Xe Bang Nounh NBCA (150,000 hectares) (PFO 2002a).

3.3.1 Phou Xang He NBCA

This protected area was established in 1993, and it includes parts of five districts: Atsaphone, 30 percent; Phalanxay, 22 percent; Phin, 10 percent; Xepon, 4 percent; and Vilabouly, 34 percent. There are 117 villages located inside the NBCA and ten villages outside. The main forest types are upper-elevation dry evergreen forest, 41 percent; dry dipterocarp forest, 7 percent; upper-elevation mixed deciduous forest, 44 percent; agricultural areas, 6 percent; and other land and forest types, 2 percent. The Phou Xang He NBCA is rich in habitat and wildlife, including mammals, birds, reptiles, amphibians, and fish. There are two ethnic groups of Lao people living in the NBCA, the *Lao Theung* and the *Lao Lum*, who conduct rain-fed rice field production, livestock raising, fishing and hunting, and non-timber forest products collection.

SIDA provided funding for the Phou Xang He NBCA from 1990 to 2001 for surveying forest and wildlife resources, aerial photo-mapping, socio-economic data collection, setting up a revolving fund for villagers, running the land and forest allocation program, and training official staff and villagers in forest management, conservation, surveying, and conducting eco-tourism activities. Currently, the DAFOs are responsible for the protected area and are cooperating with external supporting organizations, including UXO and Action North Sud.³ The UXO's mandate is to search for and destroy unexploded ordnance, left behind from the Indochina War, in the people's living areas as well as their agricultural production areas; whereas Action North Sud provides some extension activities to the villagers, including opening up rice paddy fields, providing health services, supplying tools for agricultural production, etc.

3.3.2 Dong Phou Vieng NBCA

This protected area, with an area of 53,000 hectares, was established in 1995, and then three years later it was enlarged to a total area of close to 144,000 hectares because of threats to habitat and wildlife species. The Dong Phou Vieng NBCA covers parts of three districts, Phin, Xepon, and Nong, and straddles the borders of Xepon District in the north, Tum Lan District, Salavanh Province in the south, Nong District in the east, and Phin District in the west. There are 57 villages located inside the protected area, which is rich in biodiversity resources including different forest types as well as wildlife species. The protected area includes five main rivers and their

watersheds: Xe Bang Hieng, Xe Ta Noun, Xe La Nong, Xe Pon, and Xe Chon. Streams that flow from the protected area to surrounding lands are important as sources of water for this chronically dry region.

FOMACOP undertook action on forest management and conservation in the protected area from 1997 to 2000 with the following main activities: socio-economic data collection and analysis, surveying wildlife resources, conducting the land and forest allocation program, and training official staff and villagers in forest management and conservation. Currently, DAFO, and especially the PFO, are continuing with these activities, and the protected area has been further planned and surveyed for eco-tourism activities with the aim of increasing local people's abilities to generate income as well as to protect the environment.

3.3.3 Xe Bang NBCA

The protected area straddles the border between the Savannakhet and Salavan Provinces. It is 580 kilometers south of Vientiane and 20 kilometers northwest of Salavan Province. Two-thirds of the area lies below 500 meters in elevation. The natural vegetation is largely intact, and includes a mosaic of evergreen forests (covering approximately half the protected area) and deciduous forests; the 30,000 hectares of dry deciduous forests have been identified as an important representative site for the conservation of this forest type in Laos. At least 13 species of internationally threatened wildlife are present, including the Siamese crocodile, douc langur monkey, concolor gibbon, green peafowl, and several species of wildcat. The residents of the 65 villages located within three kilometers of the protected area's boundaries make extensive use of Xe Bang Nounh's forest resources for subsistence and, to a lesser extent, for sale to markets. Fish, wildlife, dipterocarp resins, and edible and medicinal plants are extensively collected (NRCU 1992). From 1993 to 2000, SIDA supported a fund for the Xe Bang Nounh NBCA management program, which included administration, community outreach, training, resource management and protection, and research and monitoring programs.

3.3.4 Problems to be solved

Although NBCAs have strongly been supported by government agencies as well as related supporting organizations (SIDA and FOMACOP), there are still problems to be solved, as follows:

- As there are many villages located both inside and outside the protected areas, training of village forestry volunteers on forest management and conservation is still limited. Even in the Dong Phou Vieng NBCA, where training was supported by FOMACOP, the number of forestry volunteers is still limited compared to their responsibilities, similar to the situations in the Phou Xang He and Xe Bang Nounh NBCA where training was supported by SIDA. On the other hand, the forestry

³ UXO (international organization managing unexploded bombs), Action North Sud (international development organization).

volunteers already trained in forestry management and conservation are found to be bringing their experience to other villages.

- Socio-economic data collection in each NBCA is not sufficient enough for the purposes of effective forest management and conservation planning. In the Phou Xang He NBCA, district staff collected socio-economic data only where villages were accessible by road. The situation in the Dong Phou Vieng NBCA is much better, where data were collected from almost all the villages in the Phin, Xepon, and Nong Districts because FOMACOP had organized teams specifically for that purpose.
- Although each NBCA has regulations set up for land and forest management and conservation, some villagers violate these by encroaching on protected area land and forestry resources, burning grasses for their domestic animal feed, illegally logging trees, conducting shifting cultivation, etc. In the mountainous parts of the Dong Phou Vieng and Phou Xang He NBCA, rural people still practice shifting cultivation and burning grasses for animal feed. And in the Xe Bang Nounh NBCA, outsiders sometimes encroach on the forestry resources and burn grasses for animal feed.
- Unexploded bombs left over from the Indochina War still remain in the Dong Phou Vieng and Phou Xang He NBCA, preventing people from living there and opening areas for agricultural production. Nowadays, the UXO manages this activity.
- Currently, land and forest allocation is carried out in the Phou Xang He NBCA by district forestry staff from Xepon, Phin, Vilabouly, Phalansay and Atsaphone Districts, as in the Dong Phou Vieng and Xe Bang Nounh NBCA. Although land and forest allocation is implemented in each NBCA, the number of villages that have gone through the process is limited. In villages where land and forest allocation has not yet been implemented, there are many problems relating to village boundaries, land and forest use, land and forest planning, overuse of forest and biodiversity resources, forest fires, etc., especially in the mountainous parts of the Phou Xang He and Dong Phou Vieng NBCA.
- The living standards of villagers in the mountainous parts of the Phou Xang He and Dong Phou Vieng NBCA are low compared to villagers living in the lowland areas of the NBCA in terms of health security, education, and basic infrastructure (roads, schools, etc.). As well, in the mountainous parts of

the NBCA, wild animals and disease continue to damage agricultural production.

3.4 Stabilization of shifting cultivation activities

Stabilizing shifting cultivation practices is one of the five main government strategies (mentioned at the beginning of this paper). Currently, shifting cultivation activities are still practiced by rural people, especially those living in the mountainous areas of the Phin, Xepon, Vilabouly, and Nong Districts, but the area of land devoted to shifting cultivation practice has been steadily dropping annually, going from 5,392 hectares in 1996 to approximately 2,499 hectares in 2001. There are two types of shifting cultivation being practiced in Savannakhet Province, as described below. Both types of shifting cultivation are still being practiced.

3.4.1 Type 1

In the first year, villagers clear land for rice cultivation mixed with other crops such as fruit trees, trees for industrial production (for wood and other commodities), sweet corn, water melon, beans, etc. In the second, third, and fourth years, they return to cultivate the rice as well as the other production crops until their fruit and industrial trees grow larger and block too much sun (too much shade is detrimental to cultivated rice), and finally, they move on to other places to cultivate.

3.4.2 Type 2

This type of shifting cultivation is very dangerous to both land and forest resources because of the practice of slash-and-burning. Due to the fact that villagers have little control over their rice cultivation because of invading grasses and low soil suitability, they must move location every year. In 2001 this type of shifting cultivation was found particularly in the four mountainous districts of Phin, Xepon, Vilabouly and Nong, while the area of land where it was practiced varied (34 hectares, 1,370 hectares, 715 hectares, and 400 hectares, respectively).

Activities following the stabilization of shifting cultivation are carried out by government agencies (PAFO and DAFO) together with external supporting organizations (SIDA, FOMACOP, CIDSE, OXFAM, and Action North Sud). They have been conducted with a focus on the basic needs of the rural people in order to substitute their shifting cultivation practices with other types of agricultural production, including coffee tree plantations, forest plantations (including both fruit and/or industrial trees), livestock raising, and permanent paddy rice fields.

Table 3. Shifting cultivation practices in four districts

District	Shifting cultivation practices			Cultivated areas (hectares) 1996–2002						
	Total number of villages	Number of villages employing shifting cultivation	House-holds	1996	1997	1998	1999	2000	2001	2002
Phin	116	39	30	192	150	668	38	34	34	0
Xepon	161	100	4,035	3,213	3,213	3,000	2,900	2,500	1,350	1,080
Vilabouly	102	40	877	558	500	300	452	901	715	450
Nong	78	52	1,526	1,279	1,126	1,200	780	1,450	400	270
	457	236	6,468	5,392	4,984	5,168	4,170	4,885	2,499	1,800

Source: Land Allocation and Shifting Cultivation Unit, Provincial Forestry Office (2002).

3.4.3 Problems to be solved

Shifting cultivation is the main occupation of the mountain people. Although the government (of Laos) has tried to replace this practice with other, more appropriate occupations to produce higher value products, some problems can't be solved immediately.

- Over the last ten years, the government has spent considerable amounts of money to substitute shifting cultivation practices, but this investment is still limited compared to people's actual needs.
- Some of the activities meant to help stabilize shifting cultivation have not yet been implemented, again, because of limited funds available, but the list of activities the government is pursuing includes opening paddy rice fields, agricultural and industrial crop production, traditional handicrafts (weaving, making fishnets, etc.), raising livestock (buffalo, cattle, and poultry), fish farms, etc. Currently, the government is trying to stimulate these activities for rural people not only in provincial and district special zones and NBCAs but also for all people living in mountainous districts where shifting cultivation is practiced.
- Unexploded ordnance left over from the Indochina War still remains where people are living and opening up agricultural areas, and it is still being found in some parts of the districts of Phalanxay, Atsaphone, Phin, Xepon, Vilabouly, and Nong. Although the UXO is managing this activity, the process is going slowly because it is very dangerous and the area affected is quite large.

4. Concrete local guidelines extracted from the field study

The government's policy on forest management and conservation stipulates that, basically, forestry resources must be used without any kind of depletion. A new concept being used to support this policy is to involve local people in the process of forestry management and conservation. This means that the process requires coopera-

tion between both local people and related supporting organizations. In the case of this research study, good examples of changes to the forest management and conservation model based on the participation of local people implemented in Savannakhet Province can be found in (1) the rural development project, (2) the land and forest allocation program, (3) management of the national biodiversity conservation areas, and (4) stabilization of shifting cultivation activities. The proposed concrete local guidelines involve related stakeholders (local residents, government organizations, non-governmental organizations [NGOs], and related supporting organizations [RSOs]), which are divided into both internal and external stakeholders. The internal stakeholders include the village head, the village committee, and the villagers themselves, whereas the external stakeholders involve government agencies, NGOs, and other related supporting organizations (see Figure 2, below, for a description of the framework of participatory forest management).

The stages of implementing the proposed local guidelines are outlined as follows:

1. The first stage of the process is identification of the target area, taking into consideration the background of the community.
2. The second stage of the process is data collection, processing, and analysis, using appropriate technical tools for problem identification based on the rural development projects, land and forest allocation program, management of national biodiversity conservation areas, and stabilization of shifting cultivation.
3. The third stage is going back to discuss the research findings with villagers, and if the issues are agreed upon, then the process goes onto the next stage.
4. The fourth stage concerns planning for forest management and conservation as well as the village's own development programs. In this stage, however, the main points to be considered are already mentioned above in terms of problems to be solved on rural development projects, land and forest allocation, national biodiversity conservation areas,

and stabilization of shifting cultivation.

5. The fifth stage relates to submitting the proposed plan or local guidelines to the MAF, DoF, PAFO, and related supporting organization(s) for approval. If all agree on the issues, then the villagers will implement the plan.
6. The last stage is monitoring, feedback, management,

modification, and meetings. This involves villager's comments and mechanisms for the greater part.

If the proposed local guidelines are followed step-by-step, it is likely that the ultimate goal of sustainable forest management and conservation, based on local people's participation, will be realized.

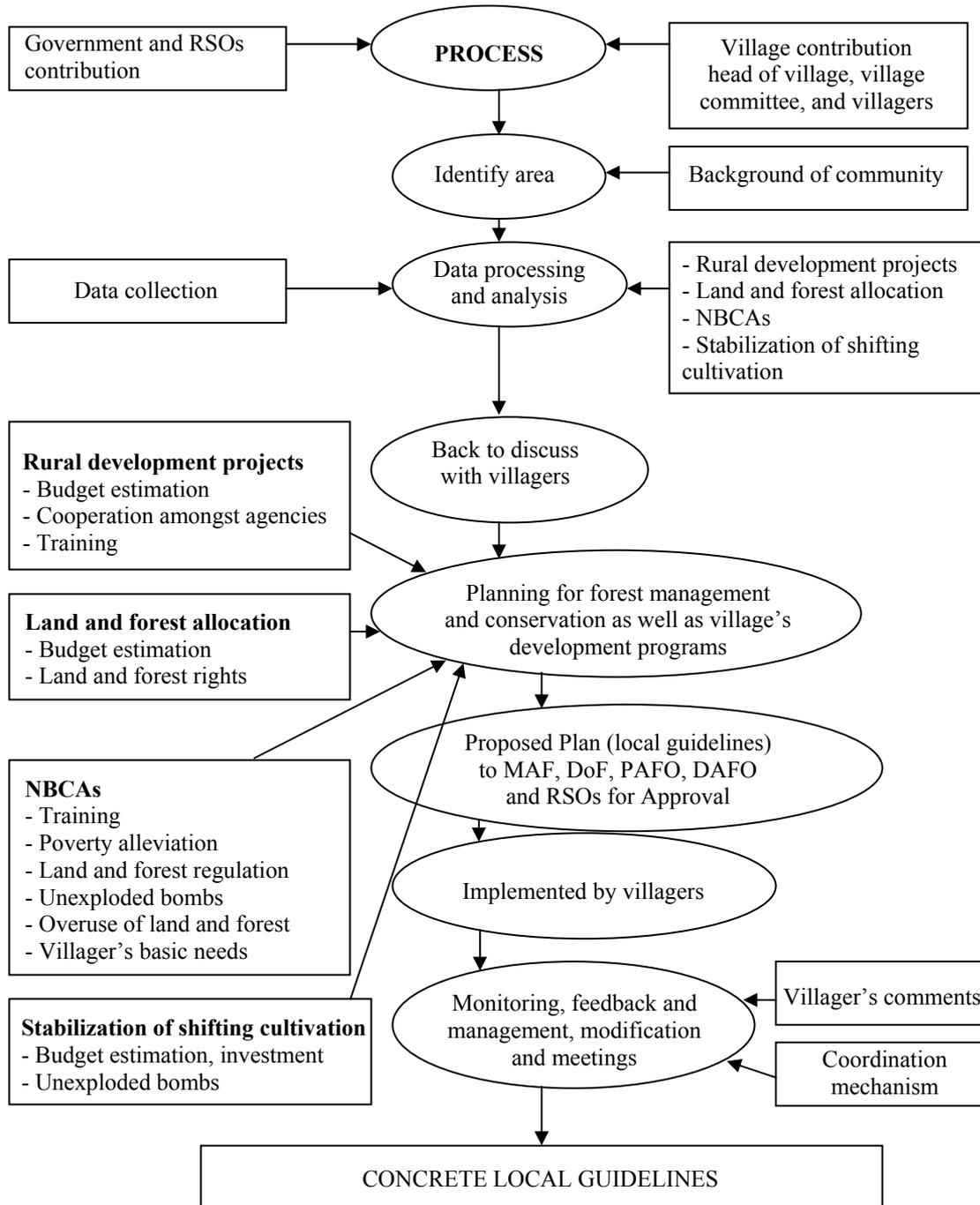
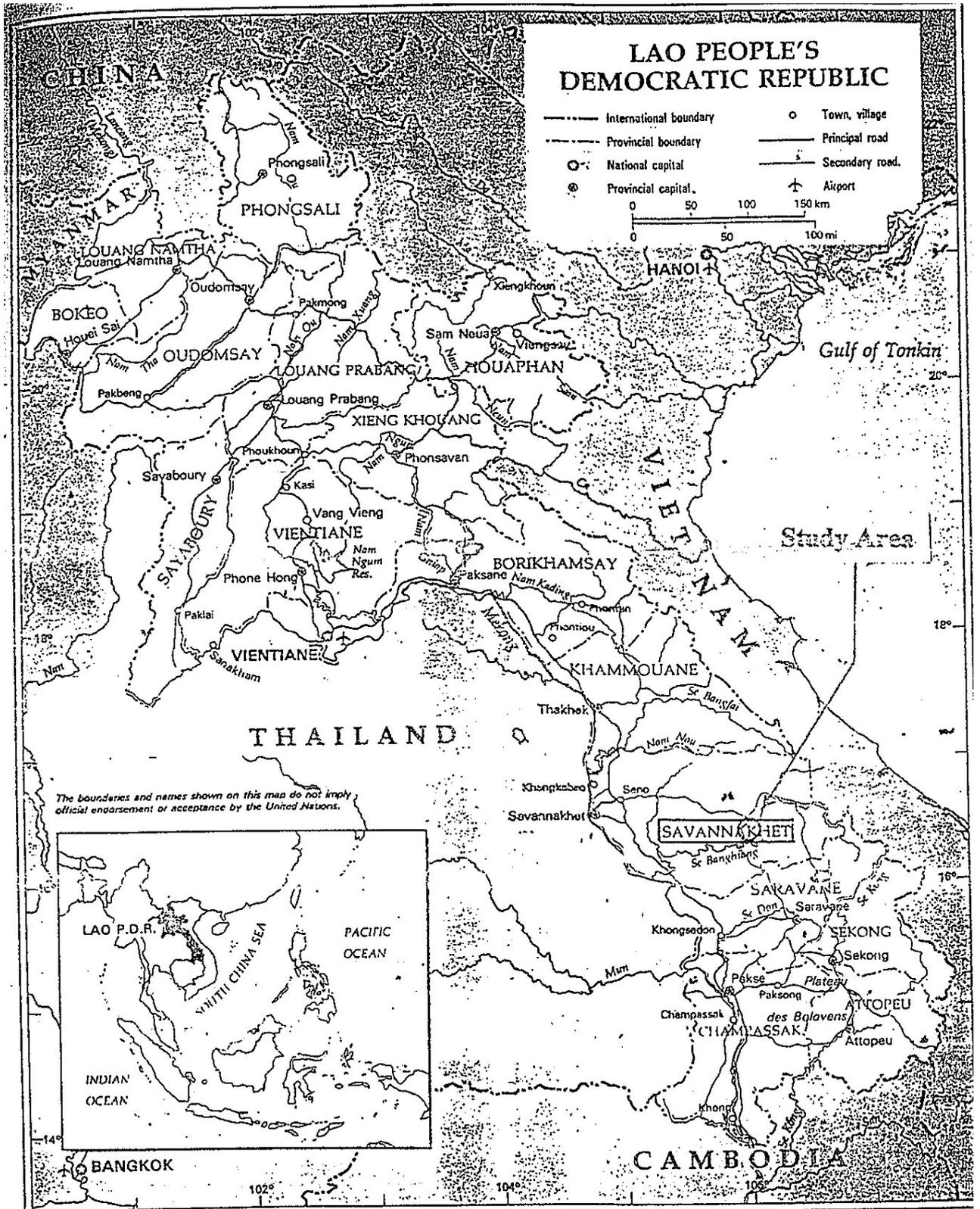


Figure 2. Framework of participatory forest management in Savannakhet Province.
 Source: Chanthavong (1998).



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Figure 3: Map of Laos

