



A Publication of the Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme

Participatory Poverty Assessment (PPA)

Attapeu Province, Lao PDR



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CHAPTER 1: INTRODUCTION

1.1 Background

Lao People's Democratic Republic (Lao PDR) is a landlocked country of 236,800 square kilometres falling mostly within the catchments of the Mekong River. Its biodiversity forms the main natural resource for a population of 55 million people living in the Lower Mekong Basin, including some five million people of Lao PDR's 5.6 million. Compared to its neighbours, the country is sparsely populated. This low population means that the natural resources in Lao PDR remain relatively intact, and that the country has a rich heritage of biological diversity ¹.

In the context of the Lower Mekong Basin, the Lao PDR watersheds provide about 60 per cent of all water. Lao PDR is geographically crucial, in that it contributes the largest amount of water flow and controls a larger basin area than any other riparian state.

Lao PDR is a "low income food deficit country" with a per capita income in 2000 of US\$330. Over 36 per cent of the population lives below the poverty line. The economy is largely natural resource based. Three-quarters of the population live in rural areas and remains almost entirely dependent on subsistence farming, fishing, wildlife and forest products. The main exports include hydropower, wood products, textiles, and agriculture and forestry products. Agriculture is the largest sector of the economy contributing 55 per cent to the GDP and engaging 85 per cent of the population.

The Government is committed to alleviating poverty and promoting development. One of the primary initiatives towards this end is the expansion of land under irrigation. Average rice yields have increased from 2.6 tonnes/ha in 1996 to 3.2 tonnes/ha in 2000. Most of this is because of a large increase in areas under irrigation from 18 000 ha in 1996 to 110 000 ha in 2000. Further expansion of agriculture land and irrigation will necessitate the conversion of wetlands and forests to agriculture use. While rice production is largely sufficient for the nation as a whole, many households, particularly in rural areas, still face food insecurity.

The significance of this diversity of economic activities and therefore the importance of wetland ecosystems has often been overlooked in national development strategies though wetlands, among other resources, play an extremely important role in the subsistence and commercial economy of the country. Increasingly, evidence indicates that wetlands are of particular importance to poorer groups. Despite the rapid economic advances in Lao PDR as well as in other countries in the region, poverty levels remain high with the poor tending to be dependant on common wetland-based resources. There needs to be a concerted effort by the Government and international support to ensure environmental sustainability, poverty reduction and biodiversity conservation.

For the development of the proposed integrated programme of activities to protect the biodiversity of the Mekong River, while maintaining the natural resource base for local livelihoods, it becomes critically essential at every stage of the Mekong Wetlands Programme's formulation to facilitate participatory poverty assessments to include the perspectives of all stakeholders with special reference to poor communities in selected sites who will benefit from the programme.

ActionAid Asia decided to contribute to the Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Programme by conducting the Participatory Poverty Assessment (PPA) exercise in the selected demonstration site of Attapeu Province in November and December 2002 in collaboration with IUCN Lao and a local multidisciplinary team. It was agreed that this analysis would be conducted as a process-oriented situational exercise using qualitative methods.

The PPA in Attapeu Province was carried out to initially assess and analyse poor peoples' perceptions about issues and aspects related to poverty, and the significance of wetlands in rural livelihoods in selected villages in the project demonstration sites. Conducting the PPA, ActionAid Asia aimed to achieve the following:

- To ensure that the programme addresses poverty reduction and sustainable livelihoods effectively
- To involve stakeholders, with special reference to poor communities, in establishing the programme
- To build capacity for the local people and government staff to conduct research and surveys using participatory approaches for the design and planning poverty reduction projects

1.2 Process

A series of meetings were held with the provincial governor, sectoral departments and massorganisations, (e.g. Department for Agriculture and Forestry, Lao Front for National Construction, Lao Women's Union and the Provincial Planning Section) to brief them about the PPA, to collect secondary data and information relating to provincial policies, development strategies and strategic socio-economic plans.

The PPA multidisciplinary team consisted of 13 members (four women and nine men). During the fieldwork, the PPA team members were divided into two teams allowing them to work in the two villages concurrently. With appropriate technical support provided by the two non-Lao staff of ActionAid, fieldwork was carried out by local participants.

In preparation for the fieldwork, a three day training workshop for all PPA field participants was held, followed by two days to practise recommended approaches at the selected villages. This enabled fieldworkers to capture basic methodologies, approaches and to develop a simple line of enquiry to support their fieldwork. The PPA was based primarily on the PRA basket of visual tools with the most frequently ones being:

- Focus group discussions with mixed and/or separate groups of respondents
- Wealth and well being rankings
- · Preference ranking and scoring
- Social and resource mapping
- Semi-structured interviews
- Diagramming

Following the field activities, a meeting was held at each village with the participation of a majority of villagers, including men and women. Initial findings collected and lessons learned were presented to the villagers for further input, suggestions and criticism. A half-day feedback workshop at the provincial level to present initial findings and observation was held on the last day of the PPA exercise with participation of provincial officials, representatives of provincial departments and related organisations. Apart from its primary aim at inviting comments on findings and relating them to socio-economic development strategies of the province, this workshop offered a forum for face-to-face dialogue between PPA team members and policy makers.

1.3 Report Writing

Team members wrote fieldwork reports at the end of each day in the local language. Diagrams, maps, etc. (drawn on flip charts or on the ground) were transferred to A4-size paper sheets. This final report was put together primarily by a team of three PPA participants of Attapeu Province and ActionAid's staff. The information and data for the compilation of this report were from about a hundred pages of daily reports and other associated field notes. Secondary data and information taken from reports, project documents, strategy papers of IUCN and Attapeu Province were also used to support background information and analyses where appropriate.

CHAPTER 2: ATTAPEU PROVINCE AND PPA VILLAGES

2.1 Attapeu Province

Attapeu Province is located 980 km from Vientiane in the extreme southeast bordering Vietnam and Cambodia. The total land area of the province is 9 428 km². About 7 355 km² (78 per cent of the province) is defined as forests, of which 7 021 km² are classified as conservation and protected area while land under agricultural cultivation is only 155 km² (1.6 per cent). The province is divided into five districts: Samakkisay, Phouvong, Saysetha, Sanamsay and Sansay².

Attapeu has two mountain zones. To the east is Annamite Mountain, about 2 000 metres above sea level, and to the south Phouvong Mountain. There is a large area of lowland plains in the centre around the confluence of three rivers – the Xe Khong, Xe Khaman and Xetsou. Smaller rivers in the area include the Xe Pian and Xe Kamplo.

The population of Attapeu is about 93 000. With an average density of 9.2 per km², it is one of the least densely populated provinces in Lao PDR. Annual population growth is 2.2 per cent and average family size is six persons per family. *Lao Loum* (lowland Lao) make up only 38 per cent of the population and the remaining 62 per cent are *Lao Theung* (upland Lao). The lowland Lao mainly settled in Samakkisay District around Attapeu Town while the upland Lao, or hill tribes, inhabit the mountainous districts.

Attapeu is among the poorest provinces and partly because of its remoteness, has had few externally funded development projects. Many people in Attapeu have a subsistence level existence. According to the Fifth Five-Year Socio-economic Development Plan (2001-2005), 133 out of 208 villages and roughly half of the 17 650 households are poor. Food needs are met through rice cultivation and are supplemented by household garden farming, fishing, NTFP collection and livestock rearing.

Rice crops in Attapeu generally have low yields and are grown primarily for household consumption. Most households own between one and four hectares of land for rice and grow only one crop per year. Rice yields range between 0.8 and 1.5 tonnes per ha, well below the national average of 3.2 tonnes/ha. Most villages do not practice dry season rice cultivation or irrigated cultivation, e.g. of the 15 000 hectares under rice cultivation, only 3 000 are irrigated.

Field holdings and yields are particularly low in upland communities where swidden rice cultivation is practiced, and those resettled from the uplands to the floodplains have little technical knowledge about paddy rice farming. Furthermore, the availability of more lucrative alternative livelihood activities, such as fishing, often deters households from further investment in agriculture.

Fishing plays a major role in rural livelihoods, and the extent of its contribution to food and income needs depends on access to water resources. Fishing can take place in the rivers and also in rice paddies and wetland areas during the wet seasons. The catch varies seasonally and according to proximity to the main rivers. Other products gathered from wetlands include frogs, lotus flowers, water vegetables and reeds. The extent of the contribution of these products to livelihoods across different groups is still not clear.

Most households have gardens, providing an additional source of food and in some cases, an important source of cash. Popular vegetables include beans, chillies and sugarcane. In communities nearer the town, these homestead plots often take on the characteristics of microscale market garden enterprises. In upland communities, families keep small plots of land for crops such as corn, cassava, cardamom and a small orchard on which they grow fruit and vegetables including papaya, banana, sesame, eggplants, potatoes and peanuts. In some upland villages, a number of families grow coffee as a cash crop. As with rice cultivation, lack of access to water is a constraint to increased productivity.

All villages have been allocated village forests from which they can collect non-timber forest products (NTFPs). Most households undertake NTFP collection and it is particularly important to those that do not have access to water resources. During times of food shortage, pressure on NTFPs increases. No clear management plans for NTFP harvesting have been established. Certain NTFPs are extremely lucrative. For example, the malva nut, known for its medicinal values in China, can be sold for about US\$5.00/kg. There may be potential for malva nut cultivation, but such options have yet to be explored.

The forests contain many valuable dypterocarp tree species. Approximately 50 000 cubic metres of timber concessions were given in 2000 and all logging revenues are transferred to the central government. Villagers are not allowed to sell timber from village forests or from plots cleared for housing or farming. Timber may only be used for local construction; however, the timber cleared often exceeds the requirements for building houses and therefore, valuable timber is sometimes burnt or left to rot ³.

2.2 PPA Villages

The two villages selected as demonstration sites were Sen Keo and Hat Oudomxay of Sanamsay District ⁴. The two villages are typical in that they are rich in terms of natural resources but a majority of villagers, e.g. the *Sou* ethnic minority, live in poverty and local communities experience a range of issues concerning wetland resource use and management. Significant changes to the natural resource base have taken place during the past few decades including the more frequent occurrence of flooding.

The two villages' infrastructure is poorly developed and they are only accessible by the Se Kong River. It is a five-hour boat trip to the district seat. Transportation is particularly difficult during the rainy season. Irrigation is little practiced, as villagers cannot afford irrigation pumps. Although there are village-level classrooms, education appears to be of poor quality. There is no sign of health facilities. The market is yet to develop in the relative absence of a cash economy.

CHAPTER 3: WETLANDS AND LIVELIHOOD RESOURCES

The livelihoods in the study area are quite diverse and depend on local natural resources. The local people identify agriculture, livestock, fisheries and forest as their key livelihood resources. The important livelihood resource most frequently cited by villagers is the area along the Se Khong River for farming. Rice cultivation is one of the major farming activities. There are basically two rice production systems: paddy or wet rice cultivation in which more than 85 per cent of villagers engage and swidden or dry rice cultivation practised by fewer farmers living in the uplands. Other food and cash crops such as maize, several species of beans, fruit tress and vegetables are also cultivated along the Se Khong River or in home gardens. Apart from rice farming, people make their living from animal raising, fishing, collecting NTFPs and selling labour as supplementary occupations. These activities are mostly for consumption but some for cash.

3.1 Subsistence Agriculture

Of farming activities, paddy rice cultivation is the most important. Most villagers have some paddy land, varying from 0.6 to 3.5 ha. They are entirely rain fed fields as no irrigation systems are constructed. The traditional farming practices produce low yielding rice varieties resulting in farmers not getting enough food for their own consumption for about six to nine months per year. Though it is thinly populated, increasing population pressure on available land resources for shifting cultivation has resulted in declining soil fertility and increased weed infestation because of decreased fallow periods.

Each household has a small garden close to their home where they grow pineapple, banana, watermelon, vegetables, sugarcane and tobacco. It is not a productive farming regime at the two villages; products from the garden are for their own consumption.

Villagers repeatedly claimed that the paddy cultivation increasingly becomes difficult because of land degradation and other unfavourable factors, and local gardening is not productive. Food shortage is a critical issue that almost all villagers experience. This explains why the primary indicator of poverty in the eyes of the poor in this area is the degree of rice sufficiency. Table 1 shows the changes in productivity over the last thirty years at Hat Oudomxay Village.

The decline in productivity of paddy cultivation and other farming activities, specifically the result of frequent flooding, makes farming more risky and uncertain, forced several households to look for alternative livelihoods. It is reported that several poor households sold paddy land partly because of their inability to farm it properly, but also because of the farming risks and the decline in productivity. This certainly creates some negative impacts on other livelihood resources, as poor villagers have to exploit new means of supplementing livelihoods to make up for rice deficiencies. Some disparity between the better-off and poorer households therefore widens because of the accumulation of arable land resources. Land holding is one of the key indicators local people use for ranking a household's wealth and well being.

Production	30 years ago	20 years ago	10 years ago	5 years ago	Present
Rice	10	10	10	9	6
Tobacco	4	4	4	4	5
Vegetables of several kinds	10	10	10	10	10
Fruit tress of several kinds	10	10	10	10	5

Table 1: Changes of productivity of key farming activities in Hat Oudomxay Village NB: Scoring is out of 10, the higher score; the higher the productivity.

At some group discussions, villagers said there has been some support provided by district-level agricultural extension services, including seeds for gardening and technical advice for paddy cultivation. It was, however, still far from adequate to meet the needs of the local communities. Respondents pointed out that services provided were of limited use because they either did not understand agricultural extension messages or could not adopt them. On the other hand, inadequate mechanisms with shortages of qualified staff at the district-level could not reach all those in need. In order to improve the food security and to reduce poverty, critical support local villagers need include:

- Effective measures to control pests, diseases and crabs
- · Credit schemes for agricultural inputs
- Provision for improved rice varieties
- Construction of irrigation systems
- Cash crop production techniques
- Flood mitigation programmes

3.2 Livestock

Livestock plays an important role in the livelihood of farmers in the remote areas. When discussing livestock, people emphasise cattle. Other home animals appear to be less economically important. Under local conditions with its low economic base, livestock production is entirely on a smallholder basis, whose production system is characterised as traditional, extensive, but resulting in a low output.

Livestock production functions as a savings mechanism in times of need. When small amounts of cash are needed, people can sell chickens. For example, villagers of Sen Keo often sell chickens to purchase white salt, kerosene, cooking powder or paying for a boat trip to Sanamxay. The sale of one buffalo can buy rice to feed a family of five for a year. In discussions about health, villagers often preferred to discuss the health of their livestock rather than their own health ⁵. However, almost all people said that when in need, they sell chickens or pigs first, cattle are last except when they require lots of money or family members fall sick.

Traditionally, cattle and buffalo are also important as draught animals. Buffaloes are considered a key factor enabling a household to farm paddy fields. Cattle are also used for transportation and are an important household asset. However, it is reported that local villagers frequently experienced animal losses from diseases (identified as mastitis and hoof ailments) and because of feed shortages. This situation is ongoing, as there are no reliable veterinary services in these villages.

Over the last 30 years, the livestock population has decreased by 70 per cent because of disease. People did not get technical advice or veterinary services to help keep the diseases under control. It was also raised that several buffaloes were stolen from the two villages. Table 2 provides information concerning the decline of livestock production at Hat Oudomxay Village over the last 30 years.

To overcome situations over which villagers have little control, local people proposed support for workable veterinary services to bring animal diseases under control, provide technical information and advice on improved livestock production and credit schemes for livestock production.

Animal	30 years ago	20 years ago	10 years ago	5 years ago	At present
Buffalo	10	0	6	4	2
Dullalo	10	8	6	4	3
Cow	-	-	-	-	-
Pig	5	-	-	5	1
Poultry	10	10	8	6	4
No. of Families	27				67

Table 2: Livestock production in Hat Oudomxay Village NB: Scoring is out of 10, the higher the score; the higher the production.

3.3 Fisheries

Fisheries play a very important role in the lives of the Attapeu villagers in general and of the two PPA villages in particular. A majority of the local people are dependent on different forms of fisheries on wetland resources for subsistence and income generation. Fishing is considered as a source of extra income or to supplement the family's food supply. In addition to fresh water fish, which is the principle source of animal protein in the area, a wide range of other wetland products are used (e.g. crustaceans, turtles, frogs, crabs, snails, shrimps, insects and several species of aquatic plants). These are considered as an important social security or welfare mechanism in times of rice deficit as well as an ongoing source of protein.

The local inland fisheries are based on a diverse range of aqua-ecosystems that are the result of the specific weather and environment in the area. Villagers can fish the Se Khong River, swamps, ponds and lakes throughout the year and during rainy seasons from seasonal streams, rice fields and flooded plains. Findings from several group discussions confirm that fishing is among the top rank of villager's secondary activity, providing 35-40 per cent of a household's annual income. The catch, however, varies and depends on several factors, including the affordability of each household to invest in motorboats, nets and labour.

It is said that female-headed households cannot go fishing. Poorer households can only do so with local tools like cylindrical fish traps or other kinds of fishing tools made of bamboo, or simple gear like hooks. Local villagers said that a motorboat and good nets cost about Kip 4 500 000 – 5 000 000. As a result, the poor cannot benefit from fishing as much as non-poor families.

Although there are many water bodies in the area, the problem of fish decline was often reported. Almost all respondents stated they could not catch as much fish as they once did. At one group discussion in Hat Oudomxay Village, villagers ranked the availability of aquatic resources as follows:

Aquatic animals	30 years ago	20 years ago	10 years ago	5 years ago	At present
Fish	10	8	7	5	3
Ale	6	6	6	6	4
Snail	10	10	10	10	10
Crab	10	10	10	10	10
Frog	10	10	10	10	10
Shrimp	10	10	10	10	10
Families involved	27				67

Table 3: Changes in stocks of aquatic products over the last 30 years at Hat Oudomxay Village NB: Scoring is out of 10, the higher the score; the higher the stocks.

The most important cause of fish decline reported in recent years was fishing pressure. The fishing pressure increases because of, under the local people's view, the expansion of the rural population. This reason has created consequent problems stemming from improved gear efficiency such as small mesh gillnets or destructive fishing methods including the use of explosives and electroshock. This seems to be inevitable even though people fish for subsistence and semi-commercial purposes.

The increase in fish trading is another significant contributor to the decline. There are several boat retailers who sell basic household items and buy fish and other agro-forestry products. Improved trading opportunities were said to be one of reasons that led to over-exploitation of aquatic resources.

Deforestation, blocking the river and streams by a number of fishing systems and the construction of dams, and the destruction of fish-spawning fields were identified as causal issues that lead to the decline of fish stock. People pointed out that these activities have consequently resulted in reduced stream flows and several streams dry out for a longer period each year. It was also closely associated with the destructive removal of forest cover at the source of the streams. This also limits the available fish habitat and nutrient flow cycles that result in a decline of the fish stock.

Local residents also raised the issue of increased fishing by outsiders. It was said that fishing activities are not confined to people's own villages but are interdependent on available fishing resources in the area. The Se Khong River and its tributaries are open resources and it is quite common for people from other villages, districts, provinces or even countries to fish. People said there is no specific legal tenure for fisheries. Under the government management framework, fisheries are identified as natural resources that are regarded as property of the Lao people as a whole. There are some overlapping tasks and responsibilities between the Department of Forestry, Department of Livestock and Fisheries and the Living Aquatic Resource Research Centre. These government bodies are inadequately staffed and loosely coordinated and as a result, the authorities, especially in management positions, do not reach the grassroots level. Regimes of fishing resources and ground level management were therefore very much based on the local context.

Other aquatic products, such as frog and other amphibians, snail, reptile, shrimp, insects, vegetables and algae are less frequently cited. Respondents confirmed the importance of these products as alternative sources of food for their daily lives.

3.4 Forest

At the macro level, forest resources are important for the socio-economic development of the country in general and in Attapeu specifically. Timber and NTFPs contribution to the national economy is estimated to be about 20-30 per cent of GDP, including subsistence use, domestic sale and export. In the isolated PPA villages, however, people gather forestry products mainly for their own consumption. The tropical forest with abundant products covers most of Sanamxay District, including the two PPA villages. Under government regulation, villagers are not allowed to sell timber from village forests or from plots cleared for housing or farming, and timber may only be used for local construction. However, illegal cutting of valuable timber, as reported, still happens.

The local people reported that forests provide a large number of NTFPs, such as bamboo, rattan, mushrooms, leaves, herbs, aquatic products and wildlife, fuel wood and poles. Because of low rice yields, natural forest resources are being exploited at an increasing rate. It was reported that most households undertake NTFPs collection and the NTFPs have increasingly become visible for their value and role to the livelihood of the mountainous population. NTFPs are critically essential for poorer households who cannot farm paddy fields or do not have access to water resources and/or rely on upland farming. For example, a significant part of the daily income of several hungry families of Sen Keo Village, such as Mrs Chanthala, comes from collecting forest leaves to produce local torches.

"Fifteen or twenty years ago there was plenty of wildlife, such as tiger, bear, deer, turtles, monitor lizards, birds etc. You can hardly see them now. Many species have disappeared due to over-hunting. When market demand increases, prices for wildlife increase, many outsiders come to hunt in our forests."

It was reported that there is a long tradition of hunting in Lao PDR in general and in these villages in particular. The communities are dependent on hunting and harvesting of wild products to supplement seasonal rice harvests, especially those who depend on climate to support their upland production. The level of hunting generally has increased in recent decades, and the availability of modern automatic weapons and explosives has had a considerable

impact on the wildlife population. Commercialisation and trade in wildlife products has also increased as prices have risen and access to previously remote areas improved. Villagers reported that wildlife was consumed within the local communities, and more recently there was increased illegal movement of live animals and parts to other areas.

The villagers recorded declines of several species of wildlife and NTFPs. They do not see any evidence of the existence of some of species like tiger, bear, deer and several kinds of birds in the local forest. Although a wide variety of animals are eaten, there are also many culturally imposed restrictions, but as natural resources become less abundant, restrictions begin to be ignored, and even these indigenous conservation practices are disappearing. Wild meat is declining more rapidly than wild vegetables, so there is a gender implication as well because in general women are responsible for vegetables and men for meat (fishing may be equal, but fishing from boats and casting nets tends to rely on more on men). Table 4 shows the changes in stock and availability of forest products in Hat Oudomxay Village.

Products	30 years ago	20 years ago	10 years ago	5 years ago	At present
Wildlife	10	8	7	6	4
Birds	10	9	8	7	6
Honey	10	10	10	10	10
Fruits	10	10	10	9	8
Timber	10	8	6	6	-
Leaves	10	10	10	10	8
Herbs	_	10	10	10	10

Table 4: Changes in stocks and availability of forestry products at Hat Oudomxay Village NB: Scoring is out of 10, the higher score; the higher the stocks and availability of products.

Local people proposed promoting local customary practices for the protection of forestry resources, efforts to strengthen the management capability of related organisations to ensure workable grassroots mechanisms for the enforcement of laws and policies to control the illegal overexploitation of forestry resources, with special reference to the restriction of outsiders' free exploitation.

3.5 Other Services

Apart from the abundance of livelihood resources, the local wetland ecosystems also provide villagers with other services and goods as well. The most frequently cited is as a transportation system. As it is not accessible by road, the only transportation local villagers can take is by boat. The Se Khong River and its tributaries, provide a seasonal waterway that links the two villages to the outside world. It is also the rivers and other water bodies that provide local villagers with water for all purposes including crop cultivation, animal husbandry, drinking and household uses.

There has been an increase in eco-tourists coming to Attapeu. Because of the remoteness and having few basic services, the people of the two villages do not benefit much from this tourism.

CHAPTER 4: VULNERABILITY, RISKS AND COPING WITH HARDSHIP

4.1 Perceptions of Risks and Vulnerability

Respondents in the two villages emphasised the vulnerability at the household and village levels though there was not a clear distinction between them. Their concern was that poor households in the two villages have livelihood systems that are so fragile and finely-balanced that a small misfortune can destabilise a household for many years. Results of the two group discussions are presented in Table 5. At the household level, the most frequent risks and vulnerability quoted related to the following:

- Factors that affected their crops and livestock, e.g. natural disasters, pests and human activities
- Associated issues of human crises like poor health and the death of key family labourers; findings indicated that these might represent a significant setback for even relatively wealthy households
- Non-crop and economic shocks, especially the death or loss of a buffalo, may take
 several years to recover from or even drop a family down in the village wealth and well
 being ranking. It is entirely true for large livestock used for ploughing since this will have
 knock-on income effect in future years as the household then has to either wait to borrow
 an animal and therefore plough at an unsuitable time or the household will have to
 exchange labour for use of a ploughing animal, thereby reducing the labour available to
 their own household's work.

At the village level, people raised issues of uncontrolled exploitation of common natural resources, such as fishing, logging and collecting NTFPs by outsiders. This increasingly becomes an issue as they sometimes employed illegal measures for their own immediate profits, ignoring local customary and/or regulations while the village-level administration has no control over these actions.

	Type of Crisis	Effect	Sen Keo Village (Mixed Group)	Hat Oudomxay (Women's Group)
Crop losses	Weather: floods and drought	Foot shortage and reduced income	High impac	t
	Pests: rats and crabs	Foot shortage and reduced income	High impac	t
	Land degradation	Food shortage while more labour needed	Medium im	pact
Human crisis	Illness	High costs for drugs, treatment and loss of income through reduced labour	Significant impact	risk and high
	Death of a key labour	Loss of labour resulting in sharply reduced income	High impac	t
	Alcoholism	High expenditure	Some families suffered	Many families suffered
Non-crop,	Death of animals and	Reduced income; reduced	. •	risk and high
economic shocks	animal epidemics Theft (of buffalo)	assets and security Reduced assets and security	impact Several fan	nilies suffered
Weaknesses in enforcing policies and legal frameworks	Increasingly unsustainable exploitation of natural resources	Decline in natural resource base; socially and economically reduced security; biodiversity losses	High impac	t

Table 5: Most frequently cited crises in the PPA villages

4.2 Production Deficit

"Nowadays, farming paddy fields increasingly becomes almost risky and uncertain work, primarily because of floods. We would have not gone hungry or at least not suffered the desperate situation of food shortage like this."

These findings reflect the fundamental causes of poverty in the two villages inhabited by subsistence farmers. Problems and crises which villagers were concerned most about were those that affected rice yields and livestock. These may take the form of natural disasters such as floods or drought, pest and disease or of traumas introduced though poor implementation of project or programmes, especially those which affect ecological systems or agro-

ecosystems of subsistence farmers or the area of production land over a long term ⁶.

At the group discussions held at Sen Keo, respondents repeatedly claimed that they had suffered long spells of drought a decade ago. Since 1996 onward, they shared concern about the increased frequency of floods. Last year, the whole area was flooded twice, with the water level more than a metre deep over the whole village. Flooding destroyed the paddy fields.

According to the groups using seasonal calendars for discussions about farming patterns in the two villages, respondents emphasised they could only farm their rain-fed paddy fields around May or June when it starts raining. But the rain also brings floods, putting all rice fields at risk. There was a devastating flood in 1968, but in recent years, it has become worse. No solutions to this dilemma were identified.

While there were no clear observations about positive effects that might be brought by floods, at one group discussion in Sen Keo, villagers said that when water levels increase or flooding occurs, almost all water bodies (small streams, swamps and rice fields) become open access for everyone. In case of rice fields, even though the field is regarded in practice as private property, others can fish or catch frogs as long as they do not damage the rice. When the rain stops and water levels decrease, restrictions again become active and enforced.

Nineteen of 23 respondents at Sen Keo said the recent increased flooding was because of deforestation and climate change. Of these 19, nine also linked the flooding to the construction of dams. Group discussions in the other village supported these views except the issue of dams. The belief of those who raised the issue was that almost all dams were constructed primarily for hydroelectric generation. Dams always make silt build up quickly in the up-stream and downstream catchments. Moreover, dam operators tend to release more water over a short period of time when it rains heavily. Floods occurred as result.

Crop failure because of pest infestations was also a problem in the two villages. Insects, crab and rats were reported to have caused a serious reduction in crop yields recently. Apart from capturing by hand, no effective measures were employed to get these pests under control.

Local villagers raised land degradation as an important issue. Land reclaimed for paddy cultivation was only good for about seven to eight years. It was because the local and traditional farming practices (little or no application of fertilizers), together with the increasing population pressure on the arable land resources did not support a sufficient fallow period, rapidly exhausted the land. Villagers recognised these issues and apart from limited sources of locally available manure, they felt too poor to finance agricultural inputs.

4.3 Human Shocks and Crises

A long-term illness in the family is one of the most frequently mentioned reasons why poor households remain poor. Apart from natural medical herbs collected from forests, a majority of villagers do not have access to health facilities of any kind.

Findings from several groups in the two villages showed that of the total of 29 households in Sen Keo, 23 could not afford to send family members to the district-level hospital. Respondents in Hat Oudomxay did not state a figure but voiced the same concern. From these isolated villages it is too costly to take the five-hour boat trip and pay for medical treatment.

"A misfortune happened with Mrs Chanthala when her husband died few years ago while fishing. The loss of a key hand and no buffalo prevented her from farming her own paddy fields. The main source of income to sustain the family of two (she has one daughter) comes from producing torches made from natural leaves and working for her brother as a shared cultivator. That doesn't support her to get enough food for the family, but there are no other job opportunities for her."

"I do not normally have any cash at home. For any daily needs that require some cash, for example going to the district market or buying basic household items from retailers, I just sell some chickens for these goods."

"Mine is a well-to-do family with a medium wooden house, two buffaloes and few other assets. My husband's health problems drove my family into a tight corner, as we had to sell all assets to obtain treatment. Poor health prevented his working, we suffer hunger as result."

The absence of public health care almost certainly results in destabilization for poor households. The case of Mrs Leung of Sen Keo shows the kind of response that a household might have to make in the event of illness. Even with support from the village and the district health service programme, the family had to sell all their chickens then two buffaloes to afford her husband's medical treatment for serious lung disease. During the last few years he could not work in the field, putting the workload on her and the four children. Reduced labour because of poor health and without the support of a buffalo prevented the family from farming the paddy fields. From a well-to-do household some five years ago, the Leung family is currently ranked as poor.

This is a common pattern of knock-on effect to a serious illness, whereby the household has to sell assets to cover the costs of obtaining treatment. However, it was voiced that a majority of households did not consider taking treatment at the

hospital but lived with ill health on a long-term basis because the costs of seeking treatment were simply unaffordable.

According to the Manager of Sen Keo Village, infant mortality rates were high, and while several families gave birth to six or seven children, only two or three of them survived. Most respondents when interviewed were not able to identify the diseases by name and why their children died. It was reported there are 10 disabled persons (visually and hearing impaired, some with paralysis) in Hat Oudomxay Village. The most important finding was that people became disabled later in life, perhaps because of poor health care facilities. They were not disabled at birth.

4.4 Economic Shocks

In general, the loss of material property does not have the same deep and lasting consequences as human shocks or crises. A majority of villagers quoted that the death of a buffalo to disease is considered one of the main factors contributing to poverty. Traditionally, cattle and buffalo are used for transportation, draught animals and are important household assets functioning as insurance in case of bad harvests. For the last decade the villagers have frequently lost animals to disease and the situation continues. Villagers said there are no veterinary services in the area.

All families in these two villages raise some small livestock. In the absence of viable mechanisms for cash savings in rural areas, small livestock are commonly used as a form of savings to be converted when cash is needed. Death of chickens and pigs therefore make it more difficult to even out the fluctuating flows of income and expenditure over the course of the year ⁷. Findings from the group work at Hat Oudomxay showed that over the past 10 years the number of livestock was considerably reduced by disease. Thirty years ago 50 per cent of the families raised pigs but now there is only one pig in the whole village. Forty-nine families are unable to cultivate their paddy fields because they lack draught animals. On average 70 per cent of the livestock has been reduced over the past 30 years (Table 2).

During group discussions at both villages, people claimed that buffaloes were stolen (though not regularly), causing great concern. It was said that even though written rules are rare in the villages, the customary practices and spiritual beliefs are quite effective in enforcement among the local people.

4.5 Policy and Law Enforcement

At the village level, people said that resources like the Se Khong River, other large water bodies, and to a certain extent forests, often function as open access. Outsiders came to fish, hunt wildlife, collect NTFPs, and even cut valuable trees. There is no specific legal tenure for fisheries, and the laws and regulations on protected areas, though they exist in theory, do not function well at the grassroots level.

The problems associated with external intervention are not simply because of the destructive measures employed by a number of outsiders to exploit natural resources. A common statement heard from people was "If we conserve the resources, how we can be sure that the others will do the same" or "If we do not catch fish now (say during spawning), or cut trees, others will do anyway." According to local points of view, these issues appear to becoming worse. While further promoting local and customary practices to manage the communal resources, some forms of workable law enforcement should be in place to secure ownership over resources. It is expected that more secure ownership will motivate people to manage resources productively.

4.6 Coping with Vulnerability and Crises

A majority of respondents of Hat Oudomxay believed that the poverty level largely remained unchanged in their village but they do have more opportunities, such as basic goods being more available and people of Sen Keo claimed there has been improvement in well being of more than a half of the villagers; there are, however, times when rural households have to cope with declines in well being. Seasonal hardship is a feature of poor, rural livelihoods, and a range of coping strategies were found in the PPA villages.

Normally, the source of assistance for poor households is family, friends and then community. In the selected villages the kinship and relationships with neighbouring communities appeared quite strong. Support may take many forms, such as providing things in kind, cash without interest, labour and moral support. These forms of support take place largely on a reciprocal basis and they appear to work well in these remote areas. Economically, these informal networks do not help much as most people are too poor to offer substantial support. People in the two villages did not mention any significant formal safety nets.

Selling assets was frequently cited. Households who managed to raise livestock, perhaps the only assets they could sell, will often have to sell them in times of crisis, though they may be quite reluctant to do so. They can be sold to purchase rice when yields are low, eaten in times of illness providing protein, sold to pay medical costs in case of severe illness or sacrificed at special ceremonies providing spiritual protection for the village and for individual families ⁸.

Day labouring was said to be one coping strategy, although it is yet to become popular. After the farming season, men, but not women, go to work as carpenters, timber fellers and fishers in neighbouring villages, districts or even provinces. Mr Mon of Sen Keo for example, spent from two to three months each year since 1997 working in Sanamxay, earning on average Kip 12 000 to 15,000 each day (about US\$1.20 to US\$1.50) after food. He pointed out that his physical health and working hard kept the family in relatively good living conditions. For those who could not leave for wage labouring, fishing and collecting NTFPs were ways for villagers to gather products for their own family's consumption.

In the worst cases, reducing consumption and living with ill health are among strategies that many families employed. Women frequently quote reducing meal size or eating less. In the case of Mrs Nang Vieng of Sen Keo, if food is in short supply, she sometimes had no choice but eat less as her five children and only breadwinner of her family, her husband, needed food.

CHAPTER 5: EXTENT, CAUSES, AND NATURE OF CHANGE IN POVERTY

5.1 What is Poverty

In all villages, the primary aspects of livelihood that signify well being are the degree of rice sufficiency and the number of livestock, especially cows and buffaloes. When these are in decline, they are the primary signifiers of poverty. For all groups, rice and livestock are possessed of souls, and when the balance between humans and spirits are upset, misfortune, that is to say, poverty, results. Decreases in rice or livestock represent disturbances in the balance of the system, which needs to be corrected by ritual as well as by physical means. The essence of poverty [for villagers] is the inability to make the necessary corrections, and the painful awareness of this reality 9 .

5.2 What Qualifies a Family to be Poor

The above perspectives were well reflected in the two selected villages where people used a range of indicators to rank poor households. These were defined largely in economic terms and there were few discussions about social issues.

During the survey, individual households and groups of villagers defined their criteria for ranking households according to wealth and well being. These rankings are a good measure of how poor people define poverty and what conditions and aspects qualify a family to be poor. Table 6 provides detail criteria used by villagers for their wealth and well being ranking.

Residents of Sen Keo divided households into four groups with one of them categorised as "better-off" while the other expressed that almost all villagers live at the local subsistence level. There were no significant economic and social status differences among households and communities. There were of course some households who lived comfortably in permanent houses or had more domestic animals but they all more or less lived their lives doing the same activities. Hat Oudomxay, with 69 households, said there were three groups: average, poor and hungry.

The most frequently cited indicators listed in Table 6 were the number of buffalo, periods of food deficit and land holding. It was noted that land holding, at least at Sen Keo, does not imply the accessibility to land resources; it refers to the capacity and the ability of a particular household to productively farm the paddy land. Food shortage almost certainly occurred as result of low production.

Perhaps the criterion of school enrolment was not cited in Sen Keo because the population is too small to have a teacher from the government's education service and the villagers are too poor to pay. As result, there have been only three teachers who taught in the village in the past fourteen years. None of which were willing to stay for more than a year.

Life cycles appeared to be one of the factors that made rural people poor. With limited support from poor parents, newly married couples of agrarian societies normally begin their new lives with very little. At the same time, these households usually have small children who must be supported but contribute little or nothing to the family labour resources. Elderly households were another group of poor and hungry in the wealth and well being rankings. Because of their age, with little or no capital reserves or savings, they were often too weak or ill to support themselves adequately. If their children fail to provide them with support, they have little hope of replacing lost labour and escaping from poverty.

The disabled and female-headed households also tend to be economically poor. As already discussed, apart from farming the paddy field and a few other low and unstable income generating work, there were not many job opportunities for this group. With the absence of formal social safety nets, it was hard for this group to overcome poverty

Category	Ranking Criteria					
	Sen Keo Village	Hat Oudomxay Village				
Better-off	- Several buffaloes (8 - 10) - Very good house - Large paddy field (4 - 5 ha) - Motorboat for fishing - Enough food for the whole year - Good garden and other small livestock - Inheritance from parents - Good health and enough labour					
Average	- Some buffaloes (2 - 3) - Good house - Paddy field (1- 2 ha) - Boat or motorboat for fishing - Lack of food from 2 - 3 months a year - Small garden - Other small livestock (chickens) - Enough labour forces	- Paddy field (1.5 - 2.0 ha) - Children attend school - Some buffaloes - Good house - Good health, enough labour - Little food for 2 - 4 months a year - Motorboat for fishing - Selling some goods in and outside the village				
Poor	 Not good house A buffalo Paddy field less than 1 ha Little food for 4 - 5 months a year With or without a boat Poor health 	 With or without a buffalo With or without paddy field Little food for 5 - 6 months a year Not enough clothe and blankets Not all children attend school No money for medicine when ill A boat 				
Hungry	 No buffalo No paddy field Not good house Little food more than 6 months per year The elderly or young couples Really poor health New settlers 	 No buffalo With or without paddy field Not good house Little food more than 6 - 7 months per year Not enough cloth, blankets or fishing nets No money for children to attend school No money for drugs when ill The disable and women headed 				

Table 6: Wealth and well being ranking criteria

5.3 Indicators Used to Compare Other Villages

The indicators for poverty at the village level were based primarily on natural resources that support the local communities. Better market access was also cited, though not frequently. Criteria used for ranking poor and/or better-off villagers did not differ significantly in terms of gender.

Respondents of Sen Keo ranked themselves relatively economically better off than their neighbours in Hat Oudomxay. The key factors cited was there being more arable land for paddy cultivation, the village is less populous and suffers less (comparatively) from flooding because they are situated on higher ground. As a result, the villagers of Sen Keo experience less food shortages than those living in Hat Oudomxay.

On the other hand, compared to Bung Keo – a village further upstream – respondents of Sen Keo put themselves worse off, citing Bung Keo's better access to the market and a dry-season road linking them to other areas. It was said that the increased accessibility and exposure enabled Bung Keo villagers to employ improved cropping patterns and to market their products. They received more support programmes from the government and other organisations simply because they can better manage and sustain them. Having better living conditions, several households of Bung Keo could afford to buy water pumps for farming the paddy fields. The issue of food shortage was not mentioned.

Women respondents cited housing conditions while several men did not. Women explained that it was hard for poor households to get forest timber as it required a lot of labour, and even if a poor household could afford sufficient building materials, they certainly did not have enough money for carpenters or the food for villagers helping build the house. This is why more than 70 per cent of Bung Keo villagers have good houses while in Sen Keo the figure is less than 40 per cent. Table 7 provides the summary of criteria, listed in descending order of their frequency cited defining a village as poor or rich.

- 1. Availability of arable land for paddy cultivation and other natural resources
- 2. The level and severity of flooding
- 3. Access to markets
- 4. Infrastructure (transportation and irrigation systems)
- 5. Number of households and periods of food deficits
- 6. Housing conditions

Table 7: Criteria for ranking villages

5.4 Causes of Poverty

When local people discussed the causes of poverty, their most common response related to issues affecting food crop production and livestock. Natural disasters ranked first as a cause of poverty, especially intermittent flooding and to a certain extent recent droughts which negatively affected paddy production. Livestock disease has been a concern, as well as the degradation and/or depletion of natural resources.

"With the physically healthy family members and the support of my four buffaloes, we used to be a 'doing alright family' some fifteen years ago. Unfortunately, all buffaloes died of disease or were stolen. Things have become worse as we could not farm the field productively, could not go fishing without nets. We are experiencing a really hard time."

In 1997 and 2001, floods occurred putting almost all villagers in food shortage. It was said that several families had to sell buffaloes for food. In the absence of veterinary services, epidemics have killed off much of the Hat Oudomxay livestock. As a result, several households have fallen fall back into the poor category. The death of a buffalo means not just the loss of Kip 1.5 million on average (approximately US\$150) – a

large amount of money for a subsistent farming household, but also limits the household's capacity to farm the paddy field. Pest and crab infestation was also an issue at both villages.

In both villages, people mentioned declining paddy field fertility. Using traditional farming systems with limited fertilizer inputs, land resources inevitably become exhausted. In several group discussions people said their inability to introduce improved rice varieties was because of poor extension services. As a result, the average rice yield is just 1.0-1.5 tonne/ha, far below the national average of 3.2 tonne/ha.

With the advantage of good access to water resources, fishing can help fill the food deficit gap arsing from unproductive paddy farming. However, poor households can not expect much from fishing by using local tools made of bamboo. People said that the five million Kip for a good motorboat with sufficient nets for fishing would be too much for any poor household to invest.

The isolation and lack of transportation prevents local villagers from marketing their produce effectively. For example, the price of good quality fish at the village is Kip 7 000 – 9 000/kg while it is double at the Sanamxay district market. As it is too costly to pay Kip 40 000 for the round trip to the district market by boat, they pay higher prices for basic family items to boat retailers servicing the village. Poor market development and few investment opportunities results in less community cash and financial infrastructure as a whole. These virtually prevent local communities from integrating into the development process that has taken place in the country.

The study suggested that women worked harder than men and that they had very little time for relaxation. Women of Hat Oudomxay and some women of Sen Keo complained about the expenditure made by men on alcohol and tobacco. They said that over-drinking was one of the main causes leading to domestic violence.

As far as the management of natural resources was concerned, people repeatedly voiced the weakness in policy and law enforcement at the grassroots level. With the increased population pressure and the unexpected intervention of outsiders on wetland resources, together with the promotion of local customary practices, a workable system to secure tenures on wetland resources is essential.

5.5 Dynamics of Poverty

A complex picture emerged about changes in poverty over the last two decades. Most people of Sen Keo perceive that overall poverty has been reduced over the last fourteen years ¹⁰ although many people are still poor or even hungry. Neighbouring villagers say that Hat Oudomxay's poverty level remains unchanged.

Category	14 yeas ago	Present
Better-off	-	3
Average	4	9
Poor	11	10
Hungry	14	7

 Table 8: Changes in household poverty in Sen Keo Village

At Sen Keo, where overall trends in poverty reduction are positive, people said the per cent of households categorised as 'hungry' was halved from 50 per cent to about 25 per cent. However, the number of households categorised as either 'poor' or 'hungry' still make up more than 60 per cent. The number of 'better-off' households has risen from almost nothing to more than 10 per cent.

"I was among the non-poor families some 20 years ago with my 10 buffaloes and some hectares of paddy field. We could make a living. Unfortunately, I started experiencing the hard times when my wife suffered her illness, and seven of my buffaloes gradually died due to disease and lack of food. I had no choice but sell two of them to meet expenditures during the hard time. We currently experience a food deficit six months per year."

At the household level, most movement has occurred only between one or two levels of the wealth and well being ranking. A larger number of households have been able to improve from 'hungry' to 'poor' in comparing with other movements, and more households experience improvement than suffer decline. Table 8 provides the detail standings ranked by the mixed groups at Sen Keo. Respondents at Hat Oudomxay indicated that a lot of changes have

taken place in the relative level of wealth and well being of the households though the overall trend of poverty at the village level more or less remains unchanged. They did not provide any concrete per centages of changes over time.

Both villages' stated similar reasons why households move up or down the wealth and well being rankings. Factors that supported households to become better-off involved the ability to farm paddy fields, owning good equipment and fishing gear, diversifying income sources (e.g. running small shops and small-trading) and to get more income from wage labour locally.

Some respondents also added that households moving up were normally able to keep family members free from diseases of economic importance. They also had better conditions to raise livestock and to keep them free from epidemics. When an outbreak does occur, better-off households may loose some animals, but can recover in a shorter period of time as they have reserves or other assets to rely on. Several of these households choose to buy paddy lands or other assets from poorer households during hard times. Natural disasters such as floods certainly affected all villagers, but better-off households managed to reinvest in agriculture and other activities to secure their livelihoods while poor and hungry households were not able to do the same.

5.6 Institutions Involved in Poverty Reduction

During the survey, local people ranked various institutions, organisations and individuals providing services and support programmes in poverty reduction and livelihood resource management. It should be noted that when discussing institutions, there was a tendency to think in terms of formal institutions. As a result, the importance of informal institutions might be underrepresented. In the Lao context, local authorities, especially at the district level, may have a close relationship, share similar livelihoods and status with the people. Results of the ranking of institutions carried out at the Sen Keo very much reflected the actual context (Table 9).

The ranking showed that the District Agriculture and Forestry Service (DAFS) is the leading organisation in implementing the government's agenda on livelihoods and resource management. DAFS works closely with grassroots communities. When district support was mentioned (e.g. technical advice, the provision of improved seeds for home gardens and paddy fields, roofing materials for village school and for individual households), villagers always referred to DAFS.

However, the generally weak technical extension service, because of limited coverage, low effectiveness and few resources mostly prevents farmers from adapting technical support to increase their production. Not having market information and linkages, ¹¹ farmers have few opportunities to increase revenues and meet their basic needs. The village heads play key roles in fostering the socio-economic life of the local communities and intermediating between the state and local communities. Each village has an elected committee consisting of representatives from the Party, a village head and one or two vice-heads. At the two PPA villages, the groups performed so well, villagers ranked them number two.

	Criteria					
Institutions	Trust	Effective	Provide help when needed	Influence	Total score	Overall importance (Ranking 1 = most important)
District Agriculture and Forestry	9	10	10	10	39	1
District Education	7	3	5	4	19	8
District Health	7	7	4	5	23	6
District Youth Union	3	3	5	7	18	9
Military Forces	5	5	6	4	20	7
Village Heads	10	10	9	9	38	2
Intermediation Board	5	4	4	3	16	11
Village WU	5	6	6	9	26	5
Private Lenders	9	9	7	8	33	4
Village Shop Keeper/Trader	3	4	3	7	17	10
Party	10	9	7	8	34	3
Village Policemen	5	2	3	4	14	12

Table 9: The effect of institutions on poverty reduction at Sen Keo Village NB. Scoring is out of 10, the higher the score; the better the performance of the institution.

Local villagers appreciate informal lending networks of which many are interest-free though culturally it is not always accepted. It was reported that small and timely loans from relatives within or nearby villages would be of great help for poorer households when experiencing their hard time. There were different points of view about formal credit schemes provided by the government banks. A majority of villagers said they were afraid of taking large loans because there were few local investment opportunities and their inability to make repayment.

A military camp nearby provides villagers (once or twice a year) with services like primary health care and free-of-charge medicine, and work to improve villagers' understanding of government policies and regulations concerning natural resource use. The other group of institutions (Lao Woman's Union, Elderly, Youth Union, and Intermediation Board) work under the supervision of the village head to mobilise activities and ensure good relations among village households. The Elderly give advice to village heads when making decisions. In Sen Keo, this group performed less well in general. The Intermediation Board sometimes failed to settle paddy land disputes and other daily-life issues among households.

The District Health Office did not provide extensive services. Health staff visited once a year on average but were unable to distribute many drugs or provide much medical advice. District health staff provided some UNICEF drugs for children, explaining why the health service received a high ranking.

District Education was ranked near the bottom. There are few teachers ready to work at these remote villages. Sen Keo is too small to have a government paid teacher while almost all villagers are struggling to make their living and unable to spare money for a school teacher. Local people were not happy with the poor state of education. It was mentioned that in the last 10 years, only four children from the two villages went on to higher schooling at the district town after completing their fourth grade.

There were slightly different views from women about the service provided by village shopkeepers and boat-retailers. Men in general appreciated the service in terms of making basic goods available right at the village, and people even received items on credit. On the other hand,

women complained about higher prices and it being difficult to keep men away from the local alcohol as they could find it in any village shop. As previously mentioned, alcoholism is costly, particularly for low-income households, and led to issues of domestic violence and disputes among households

Village policemen were ranked at the bottom because buffaloes were stolen from time to time. Local people raised their concerns not only about the significant asset loss, but also the culturally unacceptable deterioration of their customary practice and belief in guardian spirits, which are quite effective in enforcement among local people.

The villagers did not name any NGO support or programmes by other organisations. It was reported by provincial officials there is currently a bilateral assistance programme 'Promotion of Food Security for Poverty Reduction in Attapeu' under the Lao-German Food Aid Programme, but these villages are yet to receive any support.

"For the last few years, we received some, but not much, support from district sectoral services like seeds, roofing materials and drugs. The district staff just came to deliver them. These did not help much. We really need more support with special reference to technical guidance and advice." Delivery of government services to the poor has been disappointing even though in many cases, policies and programmes were adequately designed. The gap between policy and implementation remains a severe and pressing problem, especially in the case of villages, which are poor as result of the lack of provincial and district capacity. Sensitive policies

that directly affect people's livelihoods have not been executed particularly well and perhaps have not improved villager's livelihoods ¹² as expected. In several discussions, people raised issues concerning ineffective programmes. It was said that the villagers were not properly consulted about what kinds of support they really needed. As a result, programmes did not help; meet or timely address critical needs of poorer households. Poverty is to some degree a result of government agencies inability to provide services to all segments of the population.

CHAPTER 6: SOCIAL NETWORKS, EXCLUSIONS AND IMPLICATIONS

6.1 Social Capital and Cohesion

All people in the two villages belong to the Sou ethnic group and the local communities are agrarian societies. They have been established in the area for quite a long time. There were migrations from border villages into areas inside Lao PDR in the recent past because of the war in Cambodia. When the war ended, several households settled in the new areas and most Cambodians returned home.

People live at the subsistence level. There are few important economic and social status gaps among households and communities. From several discussions, while recognising that there are households who live in relatively comfort with more domestic animals, they all more or less live their lives depending on the same livelihood activities, that is why villagers said that most of them, if not all, are poor.

The kinship in these villages and relationship with neighbouring communities is quite strong. People in the villages know each other quite well. It was claimed that there was a good network among villagers on which poor households could draw, though in some instances, the level of help was very small as most people are too poor to provide substantial support. The findings from a mixed group discussion at Sen Keo about the community support mechanism are listed in Table 10.

- 1. Offering physical materials or moral support
- 2. Short-term borrowing in cash or in kind in times of crisis or hardship
- 3. Lending draught animals to other villagers for farming the paddy fields and boats for fishing
- 4. Access to mutual or reciprocal assistance such as labour exchange for house building or labour for food
- 5. Community contributions to weddings, baby delivery and funeral expenses
- 6. Community-organised handouts or food parcels for the very sick or elderly
- 7. Sharing work or contracted work, such as fishing, farming the fields and animal raising
- 8. Selling basic goods on credit

Table 10: Community support mechanism at Sen Keo Village

When there were disputes between individuals or communities, it was often said that people gossiped and complained to third parties more than direct the statements to that person. In a number of cases, such as domestic animal damage to another's crop, or people from one village encroaching on the resources of others, the village committee, especially village elders, take the responsibility for mediation.

6.2 The Nature of Support

With these villages, there was a strong community spirit and a keen sense of obligation from the wealthier households to help their poorer relatives and neighbours. This often seems to be the case in remote, less stratified, long established villages where there is only one ethnic group. Indeed, almost all forms of support, as reported at group discussions, are based on this locally reciprocal practice. The local people, particularly the elderly often said ¹³ "We cannot live alone, they ask us for some assistance today, we should help as we may ask the others for help in the future."

People receive support not only from within the villages, but also from neighbouring communities. Sen Keo villagers can leave their children (e.g. if they are attending higher schooling) with

relatives living at Hat Oudomxay or at other neighbouring villages. In cases of crop failure or natural disasters, local people received support (e.g. food, cloth and medicine) from other communities from the district or province.

Although the informal network helps people, especially poorer households during hard times, people would feel more secure if there were formal networks supported by government agencies or other organisations.

6.3 Exclusion and its Implications

"I felt ashamed when I sometime had nothing to contribute for occasions like building new houses of my neighbours, weddings, funerals etc. While other people came to these meetings to talk with each other, to enjoy their time and food, being a poor woman, I always chose to do cooking or washing with the hope that people would accept it as forms of my contribution."

Because of the homogeneous population and no significant economic and social status differences among households and communities, social exclusion was not a main theme in the well being rankings or in discussions on poverty. Almost everyone said that social exclusion was not an issue in the local context. From within villages or local communities, however, there were some expressions among poorer women of

being excluded or isolated. They voiced many reasons for this. The informal social network, for example, was quite helpful, but it certainly works on the basis of reciprocal arrangements rather than being simply a handout in the long run. Poorer individuals, with special reference to women, always felt ashamed when they could not afford gifts for weddings, funerals, traditional ceremonies and celebrations regularly taking place in the villages or nearby communities. As raised by almost all women, this was probably a necessary expenditure, even though not easy to afford, in order to ensure they remained part of the community. It is clearly the price one pays to remain in the community and to enjoy the support this can offer in time of crises ¹⁴.

Almost all local people believed their community was being excluded. Respondents said that people from other areas received more support from the government or other organisations. Other communities benefited much more from increased investment opportunities created by the market economy and they were able to improve their lives while people of Sen Keo and Hat Oudomxay still struggled for food. In this case, it may be more feelings of general marginalization and isolation rather than exclusion. It is clear that local villagers have lagged behind in term of economic growth. This may consequently prevent them from fully integrating in the development process, in both economic and social dimensions.

6.4 Role of Women

Findings from the PPA clearly suggest there are several gender issues at the household level as well as in the society. The main issues that reflected the role and status of women identified as poor from the two villages primarily included workload, participation in decision-making, women's health, responsibility in social affairs, educational opportunities for girls and household asset ownership. Main findings about the changes of women's role from the two women groups' discussion are presented in Table 11.

Although there were slightly different views about the trends and extent of change, all respondents from the two women's groups' shared the same ideas that though women play less of a role in decision-making, their status in the family and the society as a whole has improved somewhat over the last ten years. It was reported that the village Lao Women's Union created a more enabling environment through regular meetings in which women could participate to share experience and opinions. It was also through this forum women could raise issues related to community affairs and help each other broaden their understanding of primary health care for children.

"I could not read and write and I do not want my daughter to face the same situation. But as you can see, after two years of study at the village school, she can only spell a few words. I do not know what I can do under the difficult circumstance."

Village women said that school enrolment of girls has increased recently in both villages. However, they raised concerns about the poor quality of education.

School children can study up to the second and fourth grades at Sen Keo

and Hat Oudomxay respectively, but only few years after leaving school, several of them could not read and write. Girls normally have to stay at home to take care of younger brothers and sisters and do the housework. The illiteracy rate among adult women of both villages is more than 85 per cent ¹⁵ and people do not expect much from the current village schools to significantly reduce the rate for their children, especially for girls.

At the household level, the ownership of assets has changed but not in favour of women. People explained that under local conditions, men are physically more capable to undertake fishing, wage labouring, felling timber and some other work apart from farming activities, hence to secure the household income. Men therefore are in position to make family decisions. On the other hand, under their matriarchical system, it was women who were in position to decide on the use of assets. Women therefore have the feeling of comparatively having less asset ownership than they did. The change did not seem to cause any negative impacts.

Women are responsible for farming, household chores like collecting water, firewood and caring for children; while men, as presented earlier, mainly hunt, fish and cut timber. The nature of work, as agreed by all respondents, always requires women to work longer hours every day than men. The heavy workload of the ineffective agricultural production system leaves little time to women for necessary child-care. The majority of women and girls cannot go to school because of the time needed for household work.

Women must also carry out their tasks while at the same time rearing young children, and usually with the added weight an infant on their back. In several cases as reported earlier, poor women have to eat less or eat leftovers when the family experiences food shortage.

Although fewer women were affected by serious diseases at Sen Keo, people reported a number of health problems from overwork and poor nutrition of women. Health services in the remote regions that could counterbalance the general poor health of the villagers do not function well. For all of these reasons it may be concluded that among the poor, women are on average worse-off than men.

	Overall change				
Issues	Group work of Sen Keo	Group work of Hat Oudomxay			
Participation in decision- making process	Somewhat improved	Somewhat improved			
Responsibility in social affairs	Minor improvement	Minor improvement			
Educational opportunities for girls	More girls attending school	Little growth in enrolment			
Household asset ownership	Minor decrease in asset ownership	Significant decrease in asset ownership			
Women's health	Fewer women affected by diseases of economic importance	N/A			
Workload	More or less the same	Much heavier			
Domestic violence	N/A	Reduced to some extent			

Table 11: Changes in the role of women over the last 10 years

CHAPTER 7: POOR PEOPLE'S NEEDS AND ROLES FOR KEY PLAYERS

7.1 Poor People's Needs and Priorities

Poor people came up with several suggestions and priorities to reduce poverty. At the same time, they also suggested roles for key development players. The ranking of needs differed between two villages, but in the same village, views of women and men were similar. The groups' discussions are summarised in Table 12.

The construction of inter-village roads was ranked on top. People repeatedly said that the poor access critically hampers them from interacting with outsiders, government agencies and markets, which is of utmost importance. Most of the local farmers are not knowledgeable about alternative production techniques and because of this; they were reluctant to take the risk of employing new initiatives for household consumption and income generation. The lack of access to markets further hinders innovation; however, people also discussed the negative impact of improving access to natural resources by outsiders.

Two Mixed-Groups of Sen Keo	Three Mixed-groups of Hat Oudomxay
 Inter-village road construction Irrigation systems, including wells and pumps Farming inputs, including appropriate extension services Improved livestock raising methods and 	 Credit schemes for investing in agriculture Inter-village road construction Provision of improved seeds, improved extension services Improved the existing village school
veterinary services 5. Improved the existing village school 6. Provision of health care facilities 7. Credit schemes 8. Clean drinking water	 5. Construction of irrigation systems 6. Provision of health facilities, including primary health care, vaccination, water sanitation, and household toilets 7. Expansion of paddy land resources

Table 12: Prioritised needs of different groups of poor people

Note: Prioritised needs are listed in descending order of importance based on the ranking and frequency cited.

Irrigation systems and pumps was also ranked high. With active irrigation systems, farmers can reclaim more land for rice cultivation and plant two crops per year, reducing the issue of food deficiency. Extension services were considered important, however, people made the point that they must be appropriate to their local farming conditions, their level of understanding, affordability and manageability.

Social services were ranked relatively low even though all groups complained about the lack of social services. In these areas where livelihood issues are of most concern, infrastructure and technical knowledge are more highly valued.

Hat Oudomxay's villagers more frequently cited access to credit than those in Sen Keo. Poor households frequently gave credit schemes a lower ranking because as they pointed out, under local conditions with limited investment opportunities, it was not feasible to take credit for risky subsistent farming.

7.2 Roles of Key Development Players

Community

The delivery of government services to the poor is not yet effective and in the absence of programmes supported by other development players, grassroots community management of

basic livelihood activities represent important strategies for sustainable use of natural resources. The village land use plan indicates the potential for village level management capability. These land use plans are linked to the village land allocation system under Decree 16/PM. Villagers stated they can continue efforts to conserve and protect allocated land resources, including residential land, agriculture land and forests.

People discussed the difficulties in placing controls on hunting, trade in wildlife and other valuable forest products, including protected ones. For villagers, these are considered food and protein sources to supplement their food deficit. People proposed that efforts be made to persuade villagers to reduce the hunting frequency and hopefully stop it some time in the future.

Water resources are not specifically governed by the Decree. Moreover, each type of water body can be regarded as private property, common property or open access at different times. Therefore, regimes of fishing resources and ground level management capacity are very much based on the local context ¹⁶. What villagers could do, as suggested, involved the promotion of local customary and traditional practices and spiritual beliefs. The village committees indicated their commitment, largely based on consensus and partly on enforcement, to promote local practices and raise awareness to improve attitudes in favour of natural resource conservation and sustainable use, and at the same time helping each other diversify income sources, reducing pressures on the wetland resources.

The Government

Because of the structure of poverty, villagers identified a number of government organisations that could play key roles. District-level agriculture extension services were among the most frequently cited. Poorer households in critical need of support could be supplied with agriculture inputs including improved seed varieties, animal breeds, fertilizers, advice, short and medium-term credit and food during annual cropping seasons. The whole village needs the support of plant protection and veterinary services. These would enable poor rural people not only to improve their crops, but also provide them alternative livelihoods.

For infrastructure projects like road and irrigation systems, all villagers felt the construction of these projects go far beyond their capacity to finance. The agriculture service at district and provincial levels are therefore requested to allocate funds in the medium term to support that. Law enforcement was frequently cited, related policy makers of different ministries should set up workable mechanisms to translate policies and effectively enforce the law on natural resource protection, with special attention be paid to open-access natural resources. Related government agencies, because of the lack of qualified staff and budgets, should discuss with local communities and identify possible measures to back up local customary practices, enforcement of laws will be practised when and where appropriate. The control of illegal trade in wildlife and valuable forest products also rests with related government agencies.

In terms of social services, village-level education should be improved. District-level education should ensure a sufficient number of qualified teachers who commit to work in these remote villages. To make it feasible, local villagers proposed the district service pay these teachers' higher salaries in a short term, and to have long-term plans to train teachers from the area. People proposed regular visits by doctors from the district health service with special attention paid to children and women. Basic medicine and the consulting service should be made free for poorer households.

Villagers could not identify effective solutions for mitigating losses and other consequences caused by natural disasters in general and flooding in particular. They proposed the government agencies concerned and other communities to provide villagers with medicine, food, cloth and agriculture inputs when severe floods occur.

The government should increase its capabilities at district and provincial levels so they can deliver better service. Improved access to information is essential for government officers and villagers to improve natural resource planning as well as identify alternative livelihoods.

Other Organisations

Local people are unaware of any work supported or funded by sectors other than government organisations. As a result, they all defined roles that other organisations would primarily focus on: providing support in infrastructure development, physical materials and urgent relief when needed.

CHAPTER 8: CONCLUSIONS

8.1 Current Status of Wetlands, Poverty and Vulnerability

Wetland Resources

Local discussions suggested that wetlands in the PPA areas are significant, playing an important role in the lives of the local community. The majority of people are dependent on the wetlands for subsistence and income generation, but these resources are being over-exploited for food or cash with which to purchase food and to meet expenses for health, education and the market.

Structure of Poverty

Poverty, according to villagers, is largely the result of events external to the villagers over which they have little control, especially natural disasters, weaknesses in law and policy enforcement for secured tenure of wetland resources, inadequate government services and poorly implemented development programmes, human and livestock diseases and war. It is clear that poverty in Lao PDR is 'new poverty', not an endemic condition ¹⁷. In the case of the two villages, poor people could not take advantage of the abundant natural resources. So, poverty is not synonymous with hunger. The decline of basic wetland resources on which local communities rely put heavier pressure on the local villagers as demands have increased in areas of education, health, clothing, transportation, and new material goods which have appeared in the markets.

Vulnerability and Risks

Vulnerability and risks take place in many aspects of the poor people's life. Poor people are most concerned about (1) crop losses due to land resource degradation, natural disasters, pest infestation, lack of extension services and investment, (2) human crisis, including poor health and the death of a key hand in the family due to poor health services, (3) non-crop and economic shocks, including of losses of livestock due to serious epidemics and theft, and (4) weaknesses in enforcing laws and policies for wetland resources tenure and conservation.

8.2 Causes for Wetland Degradation

Although the wetland resources in the area are abundant, they are under increasing pressure from a variety of factors, the most important of which are:

<u>Overexploitation</u> from unregulated and illegal logging, NTFPs harvesting, hunting, fuel wood collection and fishing

Conversion of wetlands to agriculture land without proper regimes of fertilizer use

<u>Infrastructure development</u> (e.g. building roads) provides better access to forests and woodlands, facilitating the exploitation and trade in natural resources

<u>Population growth</u> continues to put pressure on natural resources and existing subsistence livelihoods

<u>Government policies</u> continue to put pressure on natural resources for foreign exchange. Revenues received from the export of products are not re-invested in conservation efforts at the grassroots level

Weak land use planning and natural resource management systems as well as polices and laws that do not work at the local level

8.3 Causes for Poverty

The main causes of poverty at the PPA villages can be summarised as follows:

Low productivity of agriculture land: because of the lack of suitable inputs including varieties, irrigation, fertilizers, extension services, credit and floods during the rainy season.

Over exploitation of fisheries and forest resources: because of the growing population and few appropriate conservation measures, the lack of a tenure regime does not support the local administration to effectively manage the natural livelihood resources in sustainable ways. Increased intervention of outsiders makes local resource management more difficult. As a result, these resources are in decline. This affects the modest income of the rural poor because forest and fisheries resources are what they depend on for food and medicine.

Human diseases: diarrhoea, malaria, liver fluke, dengue fever and gastro-intestine maladies are critical problems for poor people living in remote regions. Lack of hygienic conditions and poor medical care inevitably leads to ill health.

Lack of income generating opportunities: because of poor infrastructure (particularly transportation) deny access to markets. Lack of information prevents local communities from integrating into development processes.

Gender inequity: ethnic minority women and girls are among the most disadvantaged groups in Lao PDR. They comprise the largest segment with little formal education (illiteracy was 63 per cent in Attapeu ¹⁸) and perform most of the household chores while being responsible for water and firewood collection. They are under-represented in government services; few engage in formal or non-formal businesses.

As the result of poverty, people witnessed increased inequity in resource allocation. Few development and support programmes have been introduced into their villages compared with others because of a fear that they are not yet ready to manage large-scale programmes productively. Public investment, if any, has been concentrated on the development of those areas that do not match their top priorities. What the poor villagers need to survive is increased investment and appropriate extension services for improved and sustainable production of food and livestock, agro-forestry, non-timber forest products and social services.

8.4 Urgent Steps to Address Causes of Poverty and Wetland Degradation

Urgent steps proposed by villagers include:

Increased education and awareness about wetland resources and their sustainable use.

Provide hungry and poorest households with basic support such as food and medical care to secure their lives in the short–term. In the longer-term, a more efficient social safety network should be established to help poor households overcome food shortages and poor health. Responsible government agencies should provide technical and financial support and provide more clarity on policies for the protection and use of natural resources.

APPENDIX 1: SUPPLEMENTARY INFORMATION ON PPA VILLAGES

Hat Oudomxay Village

There are 60 houses with 67 Sou ethnic minority families. Of these houses, 24 of them have good roofs with enough space for the families. Others are very small with poor quality roofs. All the houses are scattered without any structured roads. There are currently 8 female-headed families in the village.

The population of the village is 379 (175 female and 204 male). There is a village school but it only goes to grade 4. Almost all the elders are illiterate, especially women.

The only source of water for domestic use and drinking is the Se Khong River. As a result, villagers frequently suffer from diarrhoea, malaria and other water born diseases. Villagers use boats for daily transportation and fishing. There are 55 boats in total; only 18 of them are motorized.

There is a village committee and the village head is active but his contribution to the development of the village is limited given the difficult situation. Other mass organizations, such as Lao Women's Union, Education Committee and Youth Association are not effective in taking up development issues because of poor of infrastructure, knowledge and resources; nor are they clear about their roles and responsibilities.

Sen Keo Village

There are 27 houses with 29 Sou ethnic minority families. More than 20 of these houses are in poor condition. The total population of the village is 131 (64 female and 67 male).

The only source of water for domestic use and drinking is the Se Khong River. As a result villagers frequently suffer from diarrhoea, malaria and other water born diseases.

Every household has small boats which are used for transportation and fishing. There are only five families who own motorboats.

Natural forest covers most of the area. A large area of flat land originally covered by forest has been converted into agriculture land. Of the 29 households, 25 of them hold some land varying from 0.7 to 4.0 ha for paddy cultivation.

The head and deputy head of the village perform well. Other mass organizations are established but do not generally work well.

ENDNOTES

- 1. The Project Proposal for Wetland Biodiversity Conservation, Lao PDR, 2002, page 1.
- 2. The Project Proposal for Wetland Biodiversity Conservation, Lao PDR, 2002, page 2.
- 3. The Project Proposal for Wetland Biodiversity Conservation, Lao PDR, 2002, page 4 and 5.
- 4. There are 52 villages in Sanamsay District; eight of them were ranked as poor, including San Keo and Hat Oudomxay— The Socio-Economic Development Strategy of Attapeu Province 2001-2005.
- 5. Participatory Poverty Assessment Report, Lao PDR June 2001.
- 6. Participatory Poverty Assessment Report, Lao PDR June 2001.
- 7. Voice of the Poor, the World Bank and DFID in Partnership with ActionAid Vietnam, Oxfam GB, SCF-UK and MRDP, November 1999, page 40.
- 8. Participatory Poverty Assessment Report, Lao PDR June 2001.
- 9. Participatory Poverty Assessment Report, Lao PDR June 2001, page 57.
- 10. Most people returned to this village around 1987-1988, as they were afraid of the Khmer Rouge in Cambodia.
- 11. Lao-German Food Aid Programme on Promotion of Food Security for Poverty Reduction in Attapeu, May 2002, page 21.
- 12. Participatory Poverty Assessment Report, Lao PDR June 2001, page 132.
- 13. Kaneungnit Tubtim, Common Property as Enclosure: A Case Study of A Community Backswamp in Southern Lao PDR, Chieng Mai University, December 2001, page 57.
- 14. Voice of the Poor, the World Bank and DFID in Partnership with ActionAid Vietnam, Oxfam GB, SCF-UK and MRDP, November 1999, page 54.
- 15. Formal literacy rates of village women are not available, this figure was provided by the head of Sen Keo village.
- 16. Kaneungnit Tubtim, Common Property as Enclosure: A Case Study of A Community Backswamp in Southern Lao PDR, Chieng Mai University, December 2001, page 68.
- 17. Participatory Poverty Assessment Report, Vientiane, June 2001, page 143.
- 18. Source: National Statistic Census 1995.





Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme

The Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme (MWBP) is a joint programme of the four riparian governments of the Lower Mekong Basin - Cambodia, Lao PDR, Thailand and Viet Nam - managed by the United Nations Development Programme (UNDP), IUCN - The World Conservation Union (IUCN) and the Mekong River Commission (MRC), in collaboration with other key stakeholders. With funding from the Global Environment Facility (GEF), UNDP, the Royal Netherlands Government, MRCS, the Water and Nature Initiative (WANI) and other donors, the programme addresses the most critical issues for the conservation and sustainable use of natural resources in the Mekong wetlands. MWBP aims to strengthen the capacity of organisations and people to develop sustainable livelihoods and manage wetland biodiversity resources wisely. It is a five-year (2004-2009) intervention at three levels - regional, national and local - with demonstration wetland areas in each of the four countries: in the Songkhram river basin, Thailand; in Attapeu province in southern Lao PDR; in Stung Treng, Cambodia; and in the Plain of Reeds in the Mekong Delta, Viet Nam. The programme aims to:

- Improve coordination for wetland planning from regional to local levels
- Strengthen policy and economic environments for wetland conservation
- Generate and share information
- Train and build capacity for the wise use of wetlands
- Create alternative options for sustainable natural resource use and improve livelihoods

MWBP is a partnership between governments, aid agencies and NGOs, and provides a framework for complementary work for wetland conservation and sustainable livelihoods in the Lower Mekong Basin.

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