

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

# Participatory Poverty Assessment (PPA)

## Lower Songkhram River Basin, Thailand



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## **EXECUTIVE SUMMARY**

The Songkram River Basin is the third largest in Northeastern Thailand, approximately 12 700 sq. km with

2 million people in four provinces - Udonthane, Nongkai, Sakonnakorn and Nakornpanom. The Songkram River originates in the Phupan Mountain Range between Sakonnakorn and Udonthane Provinces and travels 420 km to join the Mekong River at Saiburi District of Nakornpanom Province.

- Upper Songkram is a rich agricultural land with rice plains fed from several streams. People settled this area earlier than the middle and lower regions.
- Middle Songkram is a relatively dry and sparsely populated highland area, unsuitable for paddy cultivation. NTFP collection is the main occupation.
- Lower Songkram is a flood plain with freshwater swamp forests, marshlands and small streams. The swamp forests provide livelihoods for people living in this area.

Phu Thai, Kha So, Yo, Yoi and Lao settled in the area 'a long time' ago. There was new migration from the Mun and Chee River Basins as well as from across the Mekong River onto the Lower Songkram floodplain over the past 100 years. Ban Na Pieng (Srisongkram District) and Ban Kaew Pad Pong (Ta U-Tain District) from Nakornpanom Province, both located in the Lower Songkram, were selected for the PPA study.

Ban Na Pieng was an abandoned village of Kha So people who moved from the area because of constant flooding. Since 1900, people from Loei Province and Laos resettled in this natural resource rich area. At present, Ban Na Pieng has 157 households with a population of 704 (347 female, 357 male). About 70 percent of the land is flooded.

In the 1890s, ancestors of Ban Kaew Pad Pong migrated from Luang Prabang in Laos. In 1995, because of an expanded population, the village was divided into two administrative units. Currently the village has a population of 1 245 (635 female, 610 male) in 317 households.

### **Wetlands and livelihood resources**

#### **Wetlands**

In the study villages, people identified the river, small streams, oxbow lakes and swamps as natural water bodies while reservoirs and ponds were human-made. Villagers used wetlands for fishing, agriculture, irrigation, livestock grazing and NTFP collection. There is no private ownership of public water but individuals may inherit fishing rights in certain water bodies. Only a small number of households have access to irrigation. In Ban Na Pieng, the community established a management system for public water bodies where fishing rights in certain water bodies are available on concession. Money received from concessions goes to a community management fund used for repairing temples, improving school facilities and other common infrastructure.

In the past few decades, the quality of wetlands has changed. People feel there has been a decline in fish and aquatic resources, and greater competition for fish as many from in and outside the village engages in commercial fishing. Steady erosion of riverbanks has affected families using them for vegetable farming. People pointed out that conditions in several streams and ponds has been altered because of sedimentation and small check-dams. People noticed a decline in fish catch and higher incidence of floods.

Economic conditions in the Songkram region have changed significantly in the past 30 years and are reflected in their fishing activities. Those with money are now using modern fishing gear, which can catch more small fish. This has implications for the sustainability of aquatic resources. Poorer households have not been able to change fishing gear and they find it more difficult to maintain their livelihood because of the resource changes.

### **Agricultural lands**

Almost all households in the village possess land ranging upwards to 300 rai; however, about 55 percent of households do not have title. The community and government permit households without land to use the forest and wetlands. Some households have paddy fields in higher areas, while others farm the floodplain or swamp forest. Despite regular floods and high risk associated with lost rice crops, villagers continue to farm in the area. One member of the community said, "If I don't farm then I would be seen as lazy, and no one will help me when I face difficult situations like floods."

Aside from rice farming, some Ban Kaew Pad Pong villagers grew vegetables and corn. Tobacco grows along the riverbank and is sold to 'the company' or bartered for rice. In Ban Na Pieng, outside companies promoted watermelon, tomatoes and sunflower but the scheme failed because of a poor harvest. Villagers grew vegetables in their backyards for consumption. About one-fourth of the households found their rice harvest insufficient because of problems with irrigation and floods. A reservoir constructed to manage floods and provide irrigation for the second crop has not fully met its objectives.

### **Fishery**

In both villages, the fishery is important at the subsistence level. Most of the villagers said that if they manage to collect 'a lot of fish' they sell some. Only a few households with modern equipment are engaged in commercial fishing. They fish in the Songkram River and bid for fishing rights in public waters. A few households are engaged in small-scale aquaculture.

In Ban Na Pieng, a number of public swamps and small streams are auctioned annually. The successful bidders fish during the agreed timeframe, usually from October to February. While this system should benefit the whole village, some people found themselves marginalised. A section of the community said, "Those with money benefit from bidding for fishing rights. The committee announces when they get money from a sale, but we don't always know what happens to the money."

### **Forest resources**

Communities and government authorities have devised ways to protect forests while letting the poor use forestland for cultivation and wood extraction. All households collected NTFPs from swamp forests (e.g. mushrooms, insects, reptiles, bamboo) and they provided grazing pasture for cattle. Some parts of swamplands were allotted to poor people for private use, but without conferring land titles.

In Ban Kaew Pad Pong, people had permission to collect wood and NTFPs from public forests. Poor and landless families were allowed to use forestland for cultivation, but few received land title. Ban Kaew Pad Pong has private plantations of rubber, eucalyptus and golden teak. In Ban Na Pieng, people established community rules for cutting wood.

### **Migration**

International labour migration from both villages started about 15-20 years ago. In Ban Kaew Pad Pong, about 90 percent of the households received remittances from abroad. In Ban Na

Pieng, about 36 percent of households had labour migrants abroad, remitting about 3 000 000 Baht per year. Unlike thousands of migrants who may have been pushed by difficult conditions in the villages, men from Ban Kaew Pad Pong and Ban Na Pieng went abroad to better their economic and social condition. "I had enough to live and to eat at home. I got enough rice from my paddies. But I wanted to build up my status," said a Ban Kaew Pad Pong resident who was in Saudi Arabia. Those who went abroad to work were not the poorest in the village. In fact, many of them have lands and other assets that enable them to take the opportunities.

### **Institutions of merit**

People felt the poverty alleviation program initiated by the Ministry of Interior was the most important because it provided interest free loans to poor households, allowing repayment over a 5-year period. Other important programs are the One Million Baht Fund, Village Savings Group and Village Piped Water Project. People found the Local Administrative Office useful because it created jobs and distributed food packages during floods. People believed local politicians, departments of agricultural and forestry helpful as they provided direct assistance.

### **Poverty and rural differentiation**

In both villages, people suggested that the social and economic positions of most households improved during the past 30 years. However, changes in the rural economy, depletion of natural resources and insensitive development projects have brought significant rural differentiation and made several households vulnerable and poor. In Ban Na Pieng, 23 percent of households were considered poor. In Ban Kaew Pad Pong, 60 percent of households were classified as 'insufficient' because they were landless, lacked social capital or were indebted. Thirty percent were considered 'balanced' because they had agricultural land and income to cover debts. Five percent were considered 'sufficient' because they have enough agricultural land and 5 percent had "enough to share with others" with assets and income capable of supporting other households.

### **Issues involving wetlands resources and livelihood**

In both villages, the economy is based on wetland resources and livelihood diversification. In addition, substantial contributions came from labour migration. Part of the migrant remittances enables a few families to invest in commercial fishing.

In Ban Kaew Pad Pong, switching to cash crops such as cassava, tobacco, watermelon, sunflower and tomatoes required heavy chemical input and greater use of fertilizers and pesticides on the rice crop. Planting eucalyptus and frequent floods have significantly affected soil fertility and water quality. These changes have serious implications for food security and chemical pollution of water bodies seriously affects aquatic life. To make up declining productivity because of poor soil quality, farmers are investing in irrigation, fertilizers and pesticides. Agriculture has become an expensive activity, and a major cause of debt.

The amount of forest and aquatic resources consumed at home has declined because of market forces. Resources from forests and rivers are collected for sale, rather than family nutrition. Poor villagers are losing access to lands that used to be public and more people are competing for a share of shrinking public lands for cultivation and grazing.

Villagers commented on the reduced number of fish in swamps and this was attributed to more fishers using modern equipment to catch fish at the mouth of the river, letting fewer through to spawn in the flooded forest. Conflict over access to fishery resources is increasing. Villagers said

there were fewer bamboo shoots and other forest products. Forest fires (to clear land for cultivation), modern saws, using wood to make charcoal and more people extracting forest products are cited as reasons for the decline in forest wealth.

Villagers suggested that during the past 40 years, external institutions determined the nature and pace of development. Local people did not participate in planning, implementing and follow up of development projects. Inappropriate development projects initiated from outside led to dependency and indebtedness. Decentralized decision-making without mechanisms to ensure participation of poor and vulnerable groups resulted in exclusion of these groups.

### **Agenda for the future**

- Ensure that initiative outcomes do not further marginalise poor households
- Support processes that help establish local plans for natural resource management
- Establish laws and mechanisms to facilitate participation of poor households and marginalized groups in decision-making
- Strengthen local participation in decision-making processes for development initiatives and natural resource management plans

## **CHAPTER 1: INTRODUCTION OF THE PPA PROCESS**

### **1.1 Background**

Songkram is a major river in upper Northeast Thailand and the 'Sakonnakorn Basin' is considered particularly important. The catchment area is 12 700 sq. km or 8 million rai (1 rai = 0.4 acre), with a length of about 420 km. The river flows through the four provinces of Sakonnakorn, Udonrtanee, Nongkai and Nakornpanom where it joins the Mekong River. During the rainy season (May to October), the rainfall flows down tributaries to the Songkram River and meets the high runoff from the Mekong. For 2-4 months, this inundated area becomes a vast lake-like area. The peak time is August to September.

Geographers have explained that the uncommonly low riverbank is the cause for the flooding of five to six hundred thousand rai during the rainy season. For over two hundred kilometers, the river has a difference in depth of about 2 meters. The Songkram River has a flat-bottom (3-4 cm/km slope), which makes the river flow slowly. When rainfall on the northeast watershed reaches 2 700 mm and the water from the Mekong River overflows into the Songkram River for a distance of about 170 km.

The period of flooding and high water is considered an important productivity time for the Songkram inhabitants, especially those in the lower basin area. Villagers called this period 'The Red Tide' because the runoff washes red earth into the river. The brick-red colour of the Songkram River is in contrast to the clearer colour of the Mekong. Fishers believe that fish from the Mekong smell the difference and spawn in the Songkram River because of the red water.

There are about 282 natural water bodies (almost 160 000 rai) in the study areas. These natural water bodies provide a fisheries livelihood and are a major source of irrigation for dry season rice production. Fish provides easily accessible protein and income for thousands families.

### **1.2 Process**

IUCN identified the Lower Songkram River Basin as one of the demonstration sites for its Mekong River Basin Wetlands Biodiversity Conservation and Sustainable Use Programme. Participatory assessment of the community was carried out to understand the livelihoods situation, particularly in relation to the use and accessibility of natural resources in the wetlands area.

In October 2002, following a presentation by IUCN on the proposed Mekong River Basin Wetlands Biodiversity Conservation and Sustainable Use Programme, a meeting was organized in Sakonnakorn Province to discuss Participatory Poverty Assessment (PPA) with local stakeholders. A core group was established to discuss village selection and PPA framework. The first round of PPA took place in December 2002. The PPA teams were composed of five students from Sakonnakorn Rajabhat Institute, six each from Nakornpanom Conservation Club and Forestry Department, and one each from IUCN and ActionAid.

In January 2003, team members discussed the findings of the first round of PPA. They agreed that a second round was necessary to verify information and make further assessment. Mr Sobsan Petchkam from Sakonnakorn Rajabhat Institute coordinated the second round (February – March 2003) and took the main responsibility for preparing the two village reports and the integrated report in Thai.

## CHAPTER 2: GENERAL CONDITIONS OF THE LOWER SONGKRAM RIVER BASIN COMMUNITIES

The Lower Songkram River Basin has over 100 villages and a population of more than 70 000. The area is administratively under two districts (Tha U-then and Srisongkram of Nakornpanom Province). Two villages were selected for study, Ban Kaew Pad Pong and Ban Na Pieng. The main criteria were ethnicity, community livelihoods and river access.

### 2.1 Ban Kaew Pad Pong

#### Village history

Ban Kaew Pad Pong is ethnic Tai Yoh whose ancestors came from Luang Prabang in today's Lao PDR. About 100 initial settlers floated down the Mekong River on rafts and established a new town at Tha U-then District while others settled at Kham Hark. It was later found to be unsuitable so they moved to Ban Tha Rim Nam Somkram. The ancestors of Tai Yoh lived there for 70-80 years before an epidemic killed many people. They decided to move their village one kilometer away. The new location had a salt lick (*Pong*) where wild animals came to eat salt. A hunter found two crystal-like objects (*Kaew*) in a salt lick. The villagers named the new village 'Kaew Pad Pong' to mark the story.

There were only 20 families when the village was first established. In 2003, Kaew Pad Pong had 317 households with population of 1 245. In 1995, it was divided into two village administrations (clusters) under two headmen. The following table provides household and population information of the two clusters.

Table 1. Households and population of Ban Kaew Pad Pong

Ban Kaew Pad Pong	Households	Population		Village Headmen
		Male	Female	
Moo 9	198	397	418	Mr. Thui Sriha Mongkon
Moo 15	119	213	217	Mr. Wah Sriha Mongkon
Total	317	610	635	

#### Village arrangement

Kaew Pad Pong is a medium size community with old narrow roads. The Songkram River surrounds the village and the villagers rely on the river and wetlands for their livelihoods. The village is ethnic *Tai Yoh* and is accessible by river and road. It is about 28 km from downtown Tha U-then and 22 km from Srisongkram District. On the river, it is close to villages to the north and west. The mouth of the river where the Mekong and Songkram meet is 10 km east of the village.

A health center and water supply station are located at the village entrance. Behind these, there is a public forest used as a cremation site for 'adult death' and 'violent death'. There is also a sacred site known as 'the ancestral guardian spirit place'. The primary school is located next to the forest. To the north of the school lies another cremation site for adults and next to that is the Songkram River. This is where the village water supply water pump is fixed. The area north of the river and east of the village is a low sloping, wetland area subject to flooding 3 to 4 months annually. The village also has two creeks, Huay Hon Ho and Huay Tam Noy.

At the village entrance there is a public telephone and further east, built in 1892, is Wat Po Sai. Villagers built their houses around the temple making Wat Po Sai the village center. Not far from the temple lies a road to Huay Ta Fu Reservoir. On this route, there is an old village school and

a common wetland forest. On the way from the temple to the old school, is a small road to the north leads to a crematorium for children.

### **Geography**

Kaew Pad Pong is 150 meters above sea level covers about 3 900 rai: 400 rai for residences and the rest is agricultural, forest or public ponds. The area to the south is higher than in the north. During the rainy season (July to September), the lower area near the river is normally flooded. The village borders the Songkram River to the north and east, Don Doo Village in the south and Tha Tae Village and Songkram River in the west. The village has six major natural water sources:

1. Songkram River is the most important river in the Sakonnakorn Basin. It is the only river without dams or water gates obstructing the river flow. Four kilometers of the river flows through and around Ban Kaew Pad Pong.
2. The 400 rai Nong Kam Mon Pond is south of the village.
3. The 5 km Huay Ta Fu creek flows into the Songkram River to the northeast of the village. There is a water gate at the mouth of the creek, which turns the creek into a reservoir.
4. The 2 km Huay Taam Noy creek flows into the Songkram River to the north of the village.
5. The 2 km Huay Hon No creek flows into the Songkram River to the north of the village.
6. The 2 km Huay Nam Yen creek flows into Huay Ta Fu.

## **2.2 Ban Na Pieng**

### **Village history**

Ethnic *Tai Soh* relocating from Sakonnakorn Province first established the village. Relatives and friends later joined these 3-4 families. The village was named after their former village in Sakonnakorn Province. Quite some time ago, there was a major flood and Na Pieng faced hardships and relocated to Ban Kha in Srisongkram District. In 1900, a group from Loei Province came to the former Na Pieng and found it suitable for raising livestock. Shortly thereafter, some ethnic Lao came to the area. People also moved from neighboring villages.

The relocated people from Loei Province were lead by a cattle trader named 'Thidbordee'. Besides trading cattle, he was a good elephant catcher. He found the land good for his cattle when the river was low and the land dry. A man named 'Thon' led the second group from Sakonnakorn. The third group came from the Kham Maun District of Laos and was lead by a man named 'Sang Kham'

### **Village arrangement**

Ban Na Pieng is not far from downtown Srisongkram District to the north near a bridge over the Songkram River. The bridge opened in 2000. Na Pieng is four kilometers from the bridge. The village can be reached by the Sarmpong to Had Paeng road. In the old days, the villagers walked 23 km to the downtown district. A shortcut was to walk 3 km to the river and take a ferry to the other side with a one-kilometer walk to the nearest downtown. The villagers appreciate the convenience of the bridge and the road connection.

### **Geography**

Na Pieng is situated on a parcel of slightly raised land near the Songkram River. The river flows around the village from the south to the east for a stretch of about 4 km. The village borders Sarmpong and Hard Paeng to the north, Songkram River to the south and east and Ban Khae to the west. Na Pieng has 21 875 rai, of which 4 500 is agricultural, 121 residential, 1 965 common land and 15 289 rai of seasonal flooded forest. The center of the village is the highest point with

a downward slope to the village outskirts. During peak rainfall from July-September, most of the land is inundated. The village has five major natural water sources:

1. The Songkram River is essential to village livelihoods and culture, and is the largest source of food and income. The river is also the source of water for domestic use.
2. The *Nong* or ponds are created by the flow of the river onto the inundated lands. The village has 12 ponds including Nong Saeng, Nong Wai, Nong Ya Ma, Nong Na Pieng and Nong Sarng.
3. The lake or *Kud* is an oxbow lake. It is where the runoff from surrounding water bodies collects. Lakes in the village include Kud Khok Klang, Kud Ko Thung, Kud Ta Pu, Kud Reu Kham and Kud Ka.
4. The *Huay* is a small creek flowing from a pond. In the dry season, these small creeks usually dry up. The village creeks include Huay Bor Noy, Huay Nong Saeng, Huay Kud Khok Klang (flows into Kud Khok Klang).
5. The *Wang* is where the river flow is so strong that it creates whirlpools. Na Pieng has several *wang* such as Wang Bak Tu, Wang Wah and Wang Paew.

## **CHAPTER 3: SOCIO-CULTURAL STRUCTURE AND COMMUNITY CHANGES**

### **3.1 Socio-cultural structure and changes in Ban Kaew Pad Pong**

Kaew Pad Pong has been a stable community for over 100 years. The community has strong socio-cultural structures and the villagers have adapted to changes in their socio-economic system.

#### **Kinship and family system**

Ethnic *Tai Yoh* families are generally large, with 2 or 3 generations of extended family living in the same house. The *Tai Yoh* kinship system is a maternal line and recognizes the importance of the mother's family more than the father's. Men marry women to live with her family, with an exception in the case of an only son. In this case, women who marry an only son must move to the husband's family.

Kinship is very strong in the respect given to the senior members in the family. The elders in the family are the center and they follow *Tai Yoh* traditional ways. *Tai Yoh* villagers prefer to marry among *Tai Yoh* rather than outsiders. This results in a strong relationship as well as the conservation of many traditions and beliefs. They have their own language and use it in daily life.

Besides the kinship system, Kaew Pad Pong villagers have relationships with people outside the family, e.g. *Por Seu* (matchmaker), *Siew* (close or lifelong pal) and *Por Hag Luk Hag* (patronage system). *Por Seu* is a senior villager and knows the families of the bride and the bridegroom well. The matchmaker is involved in the wedding proposal and also approves and arranges the couples wedding. The matchmaker is highly respected by the new family of the bride and groom. *Siew* is a lifelong relationship between two people not usually from the same family but after the lifelong friendship, the two families become like one. *Por Hag Luk Hag* is a lifelong relationship and patronage system between a senior and junior. The acceptance of the younger by the older is as if the younger was a real son or daughter.

The strong kinship system has not changed much and the patronage system still functions. Productive activities in families continue to be a shared task, including economic and financial

aspects. There is also an informal loan system in the village, which usually carries no interest. During 1987 when migrating to work abroad was popular among the villagers, the workers relied on the money from this informal loan system to support their expenditure to go abroad. However, in 1991, some people began to charge a low interest rate.

### Groups and relationships

There are formal and non-formal groupings groups formed by internal processes and those initiated externally by governmental and non-governmental bodies. The senior members of the village govern relationships within and between groups. They act as controllers and guide what is acceptable behavior. The senior members also judge conflicts or controversies and make decisions in cases of intra-village disputes. The villagers analyzed the importance of each of these groups (Table 2).

Table 2. Importance of groups in Ban Kaew Pad Pong

Group or Organization	Level of Importance		
	High	Medium	Low
<b>1. In the village</b>			
1.1 Agriculture	x		
1.2 Sewing		x	
1.3 Housewives		x	
1.4 Cremation Revolving Fund	x		
1.5 Fish raising		x	
1.6 Cattle raising		x	
1.7 Public Health Volunteer		x	
1.8 Pig raising		x	
1.9 Youth		x	
1.10 Poultry raising		x	
1.11 Migrant labour abroad	x		
1.12 Water supply		x	
1.13 Day Care Center		x	
1.14 Elderly			x
1.15 Saving		x	
1.16 Self-defense Volunteer			x
1.17 Village Police		x	
1.18 Co-op		x	
1.19 One Tambon-One Product		x	
1.20 Medical Care Volunteer		x	
<b>2. Groups and outside organizations</b>			
2.1 Project for Poverty Alleviation		x	
2.2 One Million Baht Fund	x		
2.3 Bank of Agriculture and Agricultural Cooperatives (BAAC)	x		
2.4 Universal Health Care	x		
2.5 Forestry Department		x	
2.6 Fishery Department		x	
2.7 Sub-district Administration Organization (TAO)	x		
2.8 Civil Engineer of the Sub-district	x		
2.9 Community Development District Office		x	

## Education

Preschoolers in Kaew Pad Pong attend the Day Care Center established in 2000. The Center, located at Wat Po Sai, takes care of small children between the ages of 3 and 4 before they enter kindergarten. The primary school (established in 1988) runs the kindergarten and grades 1 to 6. As the Educational Opportunity Extension Program reached the village, the village primary school added a lower secondary level in 1999. The school is 500 meters north of the village center and all the children walk or cycle to school.

## Public healthcare

Before 1988, a traditional healer treated the village sick with herbal medicine and a healing ritual called *Yao*. When the Health Center opened in 1988, public healthcare officials and nurses started to treat the villagers. Later the health care program promoted volunteer services to solve the personnel shortages. Volunteers were able to provide home remedies and basic medical services.

In 1997 there were additional healthcare programs initiated by the government. The Ministry of Public Health and the Ministry of Labor and Social Welfare issued health cards, which provided health insurance and social welfare. In 2002, the government's health policy guaranteed healthcare for 30 Baht for all ailments or doctor visits (Universal Health Care or 30 Baht Health Care Scheme). However health care is still a family concern. The village has no garbage collection or landfill systems and as village waste management is still sub-standard; there are problems of seasonal diseases.

## Religion and beliefs

Kaew Pad Pong villagers categorize spirits in several ways. *Pi Reun* (home guardian spirit sometimes called *Pi Jae*) is the ancestors' spirit invited to the house shrine to protect the young family members. Beside the ancestral spirits, the villagers have collective spirits called *Pi Pu Ta* at the shrine on the common sacred land. The villagers have rules to protect the sacred land and natural resources. No one can cut trees at the *Don Pu Ta* where the shrine of *Pi Pu Ta* is located. The villagers perform a ritual ceremony in the sixth and twelfth lunar months to pay respect to *Pi Pu Ta*.

*Pi Ta Haek* (a spirit) takes care of the rice paddy. The *Pi Ta Haek* ritual falls on the sixth lunar month before the start of the rainy season. Spirits play a significant role in village social control, particularly through the elderly. The term *Pid Pi*, (doing something wrong to the spirit or making the spirit angry) explains the unacceptable behavior and negative consequences in a family or in the community. Another belief is *Pi Mor* (healing spirit) or more generally referred to in the village as *Mor Yao*. *Mor Yao* is a representative of *Pi Fa* or *Pi Ti Pi Tan*. The villagers believe *Pi Fa* is at the top of the hierarchy and empowers *Mor Yao* to heal the sick. Presently there are 20-30 *Mor Yao* in Kaew Pad Pong.

Besides these traditional spirit beliefs, the villagers observe Buddhist ceremonies and practice. This faith prompted them to build Wat Po Sai in 1892 and it is centermost in the minds and thoughts of the villagers. The villagers observe important Buddhist holidays and hold fundraising and donation ceremonies at the temple. Wat Po Sai has four monks and the abbot is Luang Por Peng. Wat Chai Mongkn, another Buddhist monastery with two monks is south of the village.

## Culture and traditions

The villagers observe the Northeastern tradition of *Heet Sib Song* or ceremonies of the twelve months. Some ceremonies have been adapted or suspended to be consistent with the present situation; some are kept in the old way (Table 3).

Table 3: Twelve Traditional Ceremonies

Calendar Month	Lunar Month	Tradition	Discontinued	Continuing	Adapted
December	First	Bun Khao Kam	x		
January	Second	Bun Khoon Lan	x		
February	Third	Bun Khaw Jee		x	
March	Fourth	Bun Phra Wes			X (once every 3 years)
April	Fifth	Bun Songkran		x	
May	Sixth	Bun Bang Fai			X (co with Chaiburi V.)
June	Seventh	Bun Sam Ha	x		
July	Eighth	Bun Khao Phansa		x	
August	Ninth	Bun Khaw Pradadin		x	
September	Tenth	Bun Khaw Sak		x	
October	Eleventh	Bun Ok Phansa		x	
November	Twelfth	Bun Kathin		x	

#### Local administration and leaders

The *Tai Yoh* seniority system is very strong and plays a significant role in the local administration and leadership. In 1932 the central government announced the Local Administration Act establishing the formal Village Headman system, and within this decade has come a new administrative system; the Sub-district Administrative Organization {Tambon} or TAO.

Table 4. Major village changes

1892	Wat Po Sai established. The temple is the center of the village and functions as a unit of social control.
1966	First grocery shop opens. Villagers no longer had to go to the district for necessities.
1976	A rice mill opened. Because there was no longer collective manual rice milling, no time spent talking and sharing while doing this daily chore. The mill brought significant socio-cultural changes to the village.
1984	Provincial public health office campaigned to provide clean drinking water by providing large red earthen jars to store rainwater for year round home consumption.
1985	Department of Mineral Resource drilled a 120 foot artesian well.
1986	Budget established to construct the Hany Ta Fu Reservoir.
1987	Village committee agreed to establish a revolving fund to contribute toward the cost of cremation when a member of the village passed away.
1988	A health center provides first public health services available in the village. Traditional herbal medicine and healing depreciated, modern medicine seen as more convenient and bringing faster results.
1989	Hany Taam Noy re-excavated and repaired by the Accelerated Rural Development (ARD), a government civil engineering agency.
1989	Government agency promoted fishponds.
1992	Village supplied with electricity. People bought electric appliances. There is a village information center broadcasting news and information; changing attitudes about traditional ways of life.
1994	Attempt to establish a high school. The school closed after one year and co-organized

	with villages located 7 km from Kaew Pad Pong. The number of students in Kaew Pad Pong was very small (only 36 students).
1994	Constructed a concrete road and a water supply system was started with assistance from the ARD. A center for public health services and information was also established.

### 3.2 Socio-cultural structure and changes in Ban Na Pieng

Ban Na Pieng has been dependant on their natural resources, mainly the river, since 1900. Social relations and traditional systems play an important role in sustaining village life.

#### Kinship and family system

Na Pieng has a strong kinship and family system. Most families are large and extended, about 4-5 per family. Most of them are ethnic *Tai Soh* (mixed with *Tai Lao*). Outside the family, villagers still cling to the traditional relationship system. These include the *Siew Por Hag Luk Hag* and *Por Ruam Mae Ruam*.

#### Groups and relationships

As in Ban Kaew Pad Pong, there are both formal and informal groups formed through internal processes or initiated by external agents.

The villagers view all groups formed by external agencies as important. However, when asked to rank them, villagers found the Medicine Fund and Village Police groups to be less important. Because of few services provided by the Medicine Fund, villagers would rather see a doctor at Srisongkram District Hospital. The villagers do not see the need to have village police because they are not well organized. The villagers also do not see the need to have a Marketing Promotion group as they can sell their fish to the traders or they can go to the nearest market only 4 km from the district center.

#### Religion and beliefs

Most of the villagers believe in the sprit system. *Pi Tai* (*Pi Thewada* or angel spirit) is the supreme spirit in the hierarchy. When villagers get sick, they go to the traditional spirit healer *Mor Pi Ma Yao*. In the third lunar month (February), those who follow the system observe the *Pi Tai* rite. They perform traditional dances and donate small amounts of money to the senior instructor in the *Pi Tai*. They must have flowers, incense, candles and money for the rite. Today the rite is performed by the old and not observed annually; they instead observe *Pi Nam*, which is performed in the sixth lunar month and is more fun and noisy.

They also believe in rice paddy spirits and nature guardians called *Pi Na* and *Pi Pu Ta*. The villagers use the name *Por Pu* instead of *Pi Pu Ta*. The sacred rite is performed according to traditional beliefs, usually in the sixth lunar month. Farm yields are said to depend on performing these rituals. *Heet Sib Song* is an old Isaan tradition observed throughout the year. There are traditions that re-unite families, practice Buddha's Teachings and raise funds for community activities.

Table 5. Heet Sib Traditions

Bun Kong Khaw	First lunar month	Less important now and seldom observed
Bun Khaw Jee	Second lunar month	Follows the rice harvest. New rice is steamed, molded with salt and egg and grilled, then offered to monks at the Wat.

Bun Prajampee	Third-Fourth lunar month	Observed when there is enough free time and adapted to meet situational needs.
Bun Songkran	Fourth lunar month	Songkran (also known as the water festival) is the Thai New Year according to the Thai and Indian Solar Calendar. It is the biggest holiday and a time for family reunion. Young people pay homage to the elderly by pouring scented water over their palms and asking for their blessing.
Bun Deun Hok	Sixth lunar month	To celebrate the Buddha's birth, enlightenment and death.
Bun Deun Pad	Buddhist Lent begins	Villagers offer candles to the Wat.
Bun Deun Kaw or (Bun Khaw Pradabdin)		Villagers make cigarettes from dried banana leaves and offer them to spirits of their dead relatives by laying them on grass in the fields.
Bun Deun Sib or (Bun Khaw Sak)		To make merit to people and animals that might be in trouble in order to relieve those who are suffering.
Bun Deun Sib Ed	Buddhist Lent ends	Monks remind each other of their good or unacceptable behavior before some of them leave the monkhood.
Bun Deun Sib Song		Offering and fundraising time for Wats.

### **Weddings and marriage proposals**

Socio-cultural changes have made the wedding ceremony more modern by selecting the day based on convenience for the couple. The invitations are done the way city people do them. *Bai Sri Soo Khwan* is practiced at modern weddings and integrated into the ceremony.

### **Village administration**

Na Pieng has fewer village groups and organizations than any of the surrounding villages. According to the villagers, this is because of limited time and lack of collective interests. When forming activity groups, villagers tend to form them among their family members and relatives first. The major village organizations are the Savings Group and Agricultural Co-operative Group. The Saving Group is so successful that it administrates and manages a 2 million Baht balance sheet. The main activity of the group is to provide low interest loans to the members with a good record. Villagers consider this service important.

The Agricultural Co-operative Group has similar activities but focuses on agricultural production and mutual assistance among village agriculturists. The group was established in 1975 and has 32 members with a balance sheet of 120 000 Baht.

### **Education**

Before 1964, the village used the hall at the Sri Sa-ad temple as a school, but in 1964, the village school was established. The village has a Day Care Center with 24 children and one teacher. Thirty-four students attend higher education institutes outside the village; 24 students attend formal high school, 6 attend non-formal education schools and 4 are in territory level education.

## CHAPTER 4: NATURAL RESOURCE MANAGEMENT AND OWNERSHIP SYSTEMS

### 4.1 Natural resources and ownership in Ban Kaew Pad Pong

#### Soil type

The three types of village soil are mainly silt and mud as in other areas along the river.

- Mud and silt in the floodplain where flooding lasts 3-5 months. This soil is called *Din Bung Din Taam* and found on 1 800 rai. Changing the waterway by agricultural activities has caused soil degradation.
- Sandy soil in the upland area covers about in 600 rai north of the village. This land was fertile but after years of cultivation, the soil has degraded.
- Wavy ground and sandy loam in the upland covers about 1 500 rai.

#### Land use and ownership

- 1 600 rai of lowland (seasonally inundated) and part of the upland area used for rice farming
- 600 rai of lowland with seasonally flooded forest, villagers collect NTFPs in this area
- 1 300 rai of upland area used for orchards and plantations
- 400 rai of upland area is a residential area

There are two types of land ownership (with and without land title).

- 1 600 rai of rice paddies: 1 200 rai have first class land title and 400 rai have claimant papers
- 600 rai of seasonally flooded forest: leaders and senior people from important families have claimed this area by extending their farms illegally
- 1 300 rai of orchards: all have official land title
- 400 rai of residential area: 360 rai have first class land title and 40 rai have claimant papers

#### Soil degradation

**Table 6: Causes of soil degradation and impacts**

Causes	Impacts
1. Heavy chemical use on cash crops (e.g. cassava and tobacco). Chemicals left in the soil negatively affect the soil quality	1. Lower farm production
2. Soil erosion and landslide on the riverbank	2. Increased investment
3. Surface soil lost because of fishpond and reservoir construction	3. Conflicts among people who own degraded land and encroachers on good land
4. Mono-cropping (eucalyptus plantations) over a large area	4. Less land to use
5. Lack of knowledge in the use, improvement and conservation of soil among the farmers	

## Water resources and management

Kaew Pad Pong has six natural water resources:

1. The 4 rai surface of Huay Ta Fu, located close to the river north of the village, was developed as a reservoir in 1984.
2. The 2 km Huay Nam Yen creek to the south of the village flows into Huay Ta Fu during the wet season.
3. The 2 km Huay Taam Noy creek to the north of the village flows to the river but dries up in the dry season. In 1992, the creek was excavated during a government agency project.
4. The 2 km Huay Hon Ho creek has a 1 600 rai surface area but is dry in the dry season.
5. Nong Khammon, a natural pond, has a surface area of 400 rai, is abundant and full of water leeches.
6. The Songkram River inundates lowlands around the village; making the village almost an island.

Villagers in Kaew Pad Pong fish almost all year round. In the dry season, land near creeks is used to grow vegetables, corn and tobacco as well as for cattle grazing. The main uses of these water resources include:

- Domestic uses: River water is pumped to the village water supply system. Some villagers use artesian wells.
- Fresh water fishing: Knowledge about fish species, seasons and fishing techniques are all indigenous knowledge considered a pride among Songkram watershed fishers and in this village.
- Cultivation: In the rainy season, farmers are unable to cultivate other crops so in the dry season they make use of the arable land near the riverbank for cultivation of vegetables, corn and tobacco.

Some years there are large floods and other years the water resources dry up, affecting agricultural production. Government agencies try to improve the situation by constructing water resources like Huay Ta Fu Water Reservoir, piped village water systems and drilling artesian wells.

### Changes in water resources

Most of the changes are from the natural flow of the river and rainfall over time. Long time submergence, undermining by heavy water flow, soil erosion and changes in the waterway causing small lakes shaped like an oxbow and sediment. Beside these natural effects, re-excavation, construction of dykes, weirs and reservoirs have affected the ecological system. Forestland and rice land is lost and some species of plant, fish and aqua- animal have become extinct.

### Forest in Ban Kaew Pad Pong

#### Boundary and conditions

Kaew Pad Pong was situated in a rich 1 000-rai forest. The forest is gone because of rice land clearance and logging for house construction. The only common forests left for the collective benefit are:

Table 7: Remaining forests

Forest Name	Forest	Description and Comments
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	Type	
Pa Lao Piak	Natural	400 rai of degraded forest located close to the river to the east of the village. All original tree species can be found but there are fewer of them.
Pa Saeng (flooded forest)	Natural	500 rai of seasonally flooded forest used for hot season grazing and for firewood.
Pa Kammon	Natural	400 rai similar to Pa Loa Piak. Five villagers without land title have encroached this forest.
Pa Don Pu Ta	Community	5 rai of rich, diverse and dense forest protected by strong beliefs. Its use is limited to collecting dry tree branches authorized by the village seniors.
Pa Cha (graveyard)	Community	This village has several graveyards including: 2 rai for children, 8 rai for adults, 4 rai Don Daeng graveyard for people who died in accidents.
Old School forest	Community	25 rai has been claimed back by the government and is used as grazing land by some villagers. There are also plantations (rubber, teak and eucalyptus) owned by some villagers.

### Use and management

Kaew Pad Pong villagers have common rules to manage the forests. Most public forest is available to all villagers to collect non-timber products and for cattle grazing. Small trees are with permission. In some public forest (*Pa Khammom*), landless villagers can clear land for cultivation. To date, 54 rai have been cleared and each claimant has about 5-6 rai of land. The land in Pa Seang Public Forest was open to the poor and landless to cultivate rice and other villagers to collect NTFPs. Villagers can collect NTFPs in Pa Loa Piak Public Forest, but cutting trees or collecting firewood is prohibited.

Table 8: The use of public forests in Ban Kaew Pad Pong

Forest products	Period	Avg. number of users/day	Quantity per day	Estimated Value (Baht)
At least 10 kinds of edible mushrooms	May-July	100	3 kg	70 000-150 000
Edible insects and ant eggs	Nov.-Dec	50	50 kg	75 000
	Mar-May	10	100 kg	9 000
Wild vegetables	Dec- May	10	100 kg	180 000
Bamboo shoots	May-July	300	1 ton	1 800 000
Fuel wood	All year round	All	-	Not for sale
Wood charcoal	Dry time	All	-	Not for sale
Small game - Birds, fowl and snake	All year round	3-4 per time	5-6	Not for sale
		3-4 per time	5-6	Not for sale

## 4.2 Natural resources and ownership in Ban Na Pieng

### Soil types and changes

*Din Taam*: (soil in seasonally flooded forest) covers three-fifths of the village for 5 km along the riverbank. There is about 15 200 rai of this soil and it is very good for cultivation. Before 1975, this area was inundated from July to October and this process naturally fertilized the land.

However, in 1975, there was a concession to cut trees for charcoal and this led to soil degradation. During 1981-1987, a private company bought land south of the village for a commercial agriculture project causing land speculation. Some villagers encroached the seasonally flooded forest to plant corn, melon and vegetables. Claims over the lands were made in hopes the owner could sell it to investors. However, the location was not good enough for commercial agriculture and no investor was interested in buying the land, so the land was abandoned. Later heavy rainfalls and erosion degraded the soil.

*Din Don:* This sandy soil covers 1 900 rai of village common land to the northwest of the village. The soil is sandy loam and quite fertile. Large trees were cut for house and field buildings and making fishing equipment.

*Wavy ground:* This is 500 rai of infertile soil and the buffer zone between the upland and the seasonally flooded forest. There are no large trees remaining in the area and the water has made the ground wavy.

### **Use and ownership of 21 800 rai**

- 4 500 rai (95 percent rice paddy, 5 percent vegetable gardens). There are two types of rice farming:
  - 800 rai of transplanting paddies in a fertile area with minimal or short periods of flooding. This method generally provides a good yield.
  - 3 500 rai of sowing paddies in the seasonally flooded forest. This is called *Na Siang* or risky rice farming because the fields might flood and farmers lose the whole crop. This type of farm requires less investment. In good years, the owner may get good yields.
- 15 200 rai of abandoned land including flooded bamboo forest. Sixty rai has been encroached but is not in use. During 1981-1987, villagers cleared 25 percent of the area to plant corn, melon and beans. Another 1,000 rai was allocated (without land title) to 12 landless families for cultivation.
- 1 900 rai of common upland including a community forest with rules for its collective use and benefit, however, because the rules are not strictly enforced, squatters from other villages have moved in.
- 200 rai of residential land

### **Land ownership**

There are two types of land ownership (with and without land title):

- 4 500 rai of rice paddies: 3 200 rai has second class land title and 1 300 rai has third class title
- 2 500 rai of orchard land occupied without land title
- 1 000 rai of extended paddy land with land title

### **Soil degradation**

Soil degradation is caused by the following factors:

- Little knowledge about land use and soil quality improvement
- Over use of chemicals or fertilizers causing hardened soil
- Plowing with no cultivation and no soil-covered plants
- Over use of pesticide kills good insects and soil worms
- Land abandonment after periods of heavy cultivation
- Mono cropping for market sales
- Erosion

## Water resources and management

### Types and changes

1. The Songkram River flows through Ban Na Pieng for 5 km. In the hot season, some parts of the river emerge as dry land.
2. *Huay* are small creeks: From 1977, there were a number of government infrastructure projects including the construction of weirs, reservoirs and ponds. Efforts to improve water resources for agriculture failed and no agricultural activities around the developed water resources emerged.
3. *Nong* are natural ponds caused by the subsidence of the land over decades. The village has five ponds: Nong Saeng, Nong Wai, Nong Sanoh, Nong Lom, Nong Na Pieng.
4. *Kud* are at the end of a waterway that changes its direction. *Kud* in Na Pieng include Kud Khok Klang, Kud Doh Thung, Kud Ta Pu, Kud Reu Kham, Kud Ka.
5. A *wang* is a whirlpool in the river. Wang in Na Pieng are Wang Wah, Wang Paew and Wang Bak Too.

About 85 percent of the villagers are dependent on these water resources for their fishing livelihood, while the remaining 15 percent regard them as important for agricultural activities. The best equipment for catching large numbers of fish is *Mong Kward*. It is a very large fishnet requiring 5-7 people to manage. This fishnet is illegal because it devastates fish species. Owners of this equipment must be influential, because if caught, they must negotiate with the police. Large boats with powerful engines are also required. Another type of fishing gear is *Lob Tang*, made from bamboo strips woven into traps. It is set in the river's flow to trap fish. Fish caught are medium size (one-half to 3-5 kg).

### Water resources management

Ban Na Pieng has a system to manage their public water bodies at the same time raising funds for village and community activities (e.g. repairing the temple, constructing new buildings, school maintenance and paying power bills for the public lights). The community agrees to give fishing concessions in selected public water bodies. Managing public water resources this way is an attempt to share benefits.

Table 9. Ban Na Pieng benefit management in 1999

Water Resource	Types of Bid	Amount (Baht)
Huay Mr. Bunreung	Kad Mun	500
Huay Mr. Thanom	Kad Mun	500
Nong NaPieng	Pa Nong	31 000
Nong Saeng	Kad Yai	(2-years) 30 256
Huay Tha Yang	Kad Mun	500
Huay Kud Ka	Kad Klang	5 000
Nong Mak Jab	Kad Mun	500
Huay Hong Saeng	Kad Mun	700
Huay Wang Krai	Kad Mun	900
Pak Kuk Doh	Kad Mun	800
Bor Noy	Kad Klang	1 000
Nong Nam Sang	Kad Mun	300
Huay Hae	Kad Klang	1 000
Pratunam Kud Ka	Kad Yai	7 800
Nong Kan Jang	Klang	6 000

## Forest in Ban Na Pieng

- *Taam* or flooded forest is the largest area and is now degraded. The forest animals include small birds, insects, snakes, turtles and lizards. Before 1977, the forest was fertile with many large trees and had populations of monkeys, otters, hares and barking deer.
- *Don* or upland where the river flow does not inundate the land. The forest is quite fertile but is becoming degraded as illegal cutting continues.
- *Dong* is the thick forest outside Na Pieng's boundary, which is a very fertile and with large hard wood timber. There are two thick forests near Na Pieng.

## Use and benefit

The flooded forest and the upland area are important for providing herbal medicines and small hunting for food as supplementary income for villagers. Some of the major forest and upland resources are:

- Women collect bamboo shoots and sell them to traders who come to the village. In the rainy season, bamboo shoots areas easily found and so abundant that the price drops to 12-15 Baht per kg. In the hot season they can get 35 Baht. Collecting bamboo is considered an important source of family income.
- Elephant grass (*Faek*) is a kind of long leaf grass for making thatched roofs. The villagers cut the grass, sun dried it and sew into thatch pieces and sell them for 7-10 Baht each.
- *Peo* is a kind of water grass that is cut, sun-dried and woven into mattress used by the family or offered to Wat and school, or sold for 50-100 Baht each.
- Most villagers collect fuel wood from the forest
- Wood for making fish gear mostly from *Taam*
- Wood for house construction from *Don Ong Tao* and other upland areas

## Forest management

Villagers have equal and free access to collect non-timber products or wild food from these forests. No rules and regulations control them and most of the collectors are women. Men manage small game hunting and timber needs. Cutting timber requires permission from a village meeting and only the poor families can collect timber; however, this regulation is often violated. Most timber is for house construction or silos.

## **CHAPTER 5: ECONOMIC SITUATION OF LOWER SONGKRAM BASIN COMMUNITIES**

### **5.1 Livelihood activities in Ban Kaew Pad Pong**

#### **Rice farming**

Kaew Pad Pong villagers are mostly agriculturists and have worked on farms for generations. Rapid changes in the Thai economic system have contributed to the changes in people's livelihoods; however, livelihoods remain centered on agricultural activities. Rice paddies are to the east and north of the village. In the past, villagers used water buffalo to plow the fields and relied on family labour with no investment in fertilizers and pesticides. Today there are three plowing machines, fertilizer and pest control. As there are few plowing machines in the village some still use buffalo. Because rice paddies in this village are quite small, when people finish work on their land some of them work as hired labourers on farms in other villages. About 36 families do this.

The rice cultivated is largely sticky rice, which is their staple food while plain rice is for sale. Average annual rice production is about 2 tons per 15-20 rai with sales of about 5 000 Baht per year. Families who have poor harvests have to purchase rice for domestic consumption. Rice farming is considered risky but necessary work.

#### **Vegetable gardens**

Vegetable gardens supply food and generate income. In the hot season, vegetables are grown near water sources. The largest vegetables plots cover about 31 rai in an irrigated area used by about 70 families. Crops include spring onion, garlic, peppermint, sweet basil, chili, gourd, ginger, parsley. Corn is cultivated in the hot season around irrigated areas like Huay Ta Pu Reservoir. The native corn varieties are 'supper-sweet', and earnings from this range from 300-10 000 Baht per family annually.

#### **Tobacco**

Tobacco grows along the riverbank in the dry season. Villagers occupy the land or buy the user rights. Before 1977, villagers grew native tobacco, but now grow Virginia tobacco. Besides selling the product to a tobacco company, they barter it for rice.

#### **Livestock**

Almost all families have cattle, which are considered as family assets. The animals are sold when the family needs money for emergencies, investment or special occasions. In the past there were about 2 000 cattle in the village, but today there is less than half of that. Some villagers' use plowing machine while others rent buffalo to plow their small rice paddy. Villagers also raise pigs and poultry.

#### **Fishing**

The major sources of fish are the Songkram River, Huay Ta Pu, Huay Hon Ho and Huay Nam Yen. Every family has some fishing gear (nets and traps). Villagers also raise catfish and carp in their fishponds, getting fingerlings from the Freshwater Fishery Office.

#### **Collecting non-timber forest products and hunting**

Kaew Pad Pong villagers harvest mushrooms and bamboo shoots from seasonally flooded forest. The Khammon forest is the main source of mushrooms. Their food needs and family income relies on forest resources. Average income from collecting wild foods ranges from 500-30 000 Baht per person per year. Hunting for birds, frogs, snakes and edible insects is also

important. The most valuable item is red ant's eggs, which are very popular in the market and in high demand. The price is about 100-120 Baht per kg.

### **Domestic and overseas labour migration**

Aside from agricultural work, villagers engage in casual labour; mainly woodcutting, orchards and house repair. If they migrate, the popular destination is Bangkok, mainly to work in factories and shops. About 80 percent of the households (120 families or 200 people) seek work abroad. Most of them go to Singapore and Taiwan. They pay up to a hundred thousand Baht to labour agencies to get jobs in these countries. Despite the high cost, many villagers hope to improve the families' economic situation. They also see going abroad as being good experience. Those who have become successful can display signs of wealth (e.g. modern electric appliances, big houses or having a car).

### **Trading and business operations**

There are 13 grocery stores in the village. All retail goods come from wholesalers in Srisongkram District, Nakornpanom Province and some from Sakonnakorn.

### **Dress-making**

A group of 15 women (organized and financed by the TAO) trained to make clothes. The price for sewing one school uniform is 4-7 Baht. Some earn 200-300 Baht a month.

### **Investment**

Local livelihoods involve some level of investment. Aside from monetary and material assets, local wisdom and knowledge are important assets that can be invested. Capital investment does not guarantee profit but small and appropriate investments may yield good results. For example, 1 000 cucumber plots were treated with 200 Baht of manure, 45 Baht of chemical fertilizer and pesticide, plus about 1,000 Baht of labour. Sales were about 5 000 to 6 000 Baht.

One villager invested 80 000 Baht on building eight fishponds, added fingerlings for 2 500 Baht and feed rates of 1 800 Baht a month. He did not receive a good price in the village and did not make a profit. Compared to river fishing, a fisher buys one or two fishnets for about 1 000 Baht each and can fish all year round.

Working abroad is an investment that leads villagers into debt. Each labourer needs to have 100 000-150 000 Baht. Some mortgage their house or farmland to the bank or to the labour agencies. Their salary abroad is about 20 000-50 000 Baht a month. Some have to work overtime to pay back the loan and have money to save.

### **Production management and products**

In the past, local livelihood was one of self-sufficiency and dependent on natural resources. For four decades, changes toward a modernized lifestyle have brought incompatible livelihoods to the villagers. The new way of life is about wealth and the accumulation of material and monetary surpluses. Driven by profits, production patterns changed to meet market demands rather than family and community needs. In Kaew Pad Pong, there are two production management systems.

- Government initiated and supported projects to increase production e.g. One Million One Village Fund provided agricultural loans. The Accelerated Rural Development Office constructed a reservoir and re-excavated water resources. The TAO promoted fishponds and the Freshwater Fishery Office provided fingerlings. In 2001, the Ministry of Interior

Affairs promoted a 'Poverty Relief' project aimed at generating income from livestock and agricultural activities.

- Without support from government offices, villagers manage their own resources (land, water, forest, money and welfare). Their understanding and knowledge of natural resources makes them experts in using and conserving. They know what works. Learning appropriate local technologies creates no alienation in the village.

### **Markets, trade and transportation**

Traditionally, villagers produced their own food or bartered. Banks have set up in the village and while some people deposit their money in the bank, using this service is still new for many villagers.

Kaew Pad Pong has 13 local stores but there is no central market because each household produces their own food and vegetables. Some consumption goods are available at district centers not far from the village. Products sold outside the village include cucumbers, corn, beans, mushrooms and wild vegetables. Poultry, pigs, cattle and woven utensils are also village products sold outside. Villagers have to buy medicine and household products like soap, shampoo and toothpaste. Some families have to buy rice and fruits.

The villagers transport their products in small trucks and village buses. The route is through Ban Tha Tae and main roads between the districts.

### **Relationship with production units in the village**

Organizations concerned with the promotion of village production projects are in line with policies of external agencies rather than based on villagers needs. Projects have their own package on what to produce and how. When the project is finished, contact and relationships with the agencies also stop. The only locally organized organization with close relationships with the villagers is TAO (Tambon Administration Organization). Four members of the TAO are from this village.

Top down policies and projects do not always include village participation and often do not meet the needs of the villagers. Government support programs often start with preconceived notions that villagers cannot initiate or manage a project. The natural resource management project, the production project and even the processing project, have been dependent on the interest of powerful bodies and funding agencies. These projects promote new and complicated knowledge beyond the villagers' familiarity. From the participatory economic assessment, the villagers of Kaew Pad Pong categorized their economic situation as:

**Insufficient:** a landless family in debt with little or no social capital and limited income generation; 60 percent of villagers fall within this category

**Balanced:** owning farmland, debts equal to assets and income; moderate earning capacity and average income; 30 percent of villagers fall within this category

**Sufficiency:** owning farmland, debts less than assets and income, earning capacity and income is high; 5 percent of villagers fall within this category

**Enough-to-share:** very high income with property and assets; enough to lend to others; 5 percent of villagers fall within this category

## 5.2 Livelihood activities in Ban Na Pieng

### Occupations

Before 1977, the villagers relied heavily on natural resources. Agricultural activities provided only domestic requirements placing little or no pressure on the natural resources. The village became part of the modern market system and followed intensive agricultural production. Villagers produce to sell in the market and this affected village life.

### Rice farming

Village rice paddies cover 4 500 rai and there are two methods of farming.

**Transplanting paddy:** This covers about 2 000 rai. Ninety-percent of farmers use plowing machines and only 10 percent use buffalo, although some may hire plowing machines to plow instead. Most of the rice grown is sticky rice, which is their main staple food. Most of the families spend money on rice sprouts for transplantation. One month after transplanting, they use chemical fertilizer at least twice and some may need to spray pesticide. During harvest, they hire labour to help at about 120 Baht per day. The investment on this type of rice farming is around 12 000-15 000 Baht per 15 rai per year. If their rice paddy is not flooded, they get 4 tons of un-husked rice. If they sell all, they get 24 000 Baht. Most keep this rice for the entire years domestic consumption with any surplus sold.

**Sowing rice:** Farmers plough, sow and weed a rice field, then use fertilizer and pesticides. If there is little water in the rainy season, they will reap a good harvest. The investment on this type of farm is around 5 000-6 000 Baht per 15 rai per harvest. They harvest around 5 tons rice and if sold, receive 30 000 Baht. Forty percent of families produce enough for consumption and sale, 34 percent produce enough for the entire year's domestic consumption and 26 percent do not produce enough for their entire year's consumption; they have to exchange fish for rice or depend on their relatives.

### Fishing

Every family has at least one member fishing for the family. Male members are the main fishers with women responsible for catching frogs. Fishing equipment used includes fishnets, traps, hooks and rods.

- *Mong Kwad* is a large river seine used March through July. Earnings are about 40 000 to 60 000 Baht per year.
- *Mong* or ordinary fish net is used all year round by 65 percent of fishers and earns about 10 000 Baht per person per year.
- *Kad* is a fine net set in September to block the mouth of the creeks where they meet the river. *Kad* requires labour to make it work so villagers gather as a group to undertake this fishery. Earnings range from 20 000 to 200 000 Baht. Each in the group may get up to 20 000 Baht.
- *Tum* is made from bamboo strips woven into traps. Fish species vary according to season and the trap type made accordingly. Earnings are about 3 000 to 5 000 Baht per year per family.
- Hook and rod are used from May to September for specific species of fish. Earnings are about 3 000 to 5 000 Baht per year per family.
- Bamboo traps are set in the river from March to July. Earnings are about 10 000 Baht per year. There are 20-50 fishers using this kind of trap.

**Collecting non-timber forest products**

Village women collect a bamboo shoot called *Kasa*, selling it fresh or preserved. Earnings are about 10 000 Baht per year. Other wild foods collected are edible bugs, ant eggs, crickets and mushrooms. Earnings are about 5 000-8 000 Baht.

**Livestock**

Most villagers have cattle. There are 86 water buffalo and 54 cows in the village. Poultry is a source of fresh meat.

**Vegetable gardens**

Kitchen vegetables like chili or peppers, eggplants and corn are grown in backyards. Some villagers were convinced by a private company to grow watermelons and marigolds. The company told them that it would buy the harvest at a guaranteed price. However, when the harvest came, there was no purchase from the company as it claimed the products were sub-standard. Many villagers lost money and went into debt from this investment.

**General labour**

Many villagers hire out as labours following the rice harvest. They work as carpenters, construction workers, timber and farm workers. Some find work in factories and shops in Bangkok or other large cities. At least 200 villagers work outside the village with an average of 1-2 from each family. About 20 laborers have gone to work as construction workers in Middle East countries earning 15 000 to 30 000 Baht a month. The high earnings attract other villagers and they try to get a job abroad. They hope that earnings from abroad will help improve their economic situation and living standards.

**Trading or operating a small business**

There are 2-3 stores but because the village is located near the center of the district and transportation is good enough to travel everyday, many shop in the market. There are hawkers that sell fish sauce, soap, toothpaste, clothes and shoes.

## **CHAPTER 6: ANALYSIS OF POVERTY IN THE LOWER SONGKRAM RIVER BASIN COMMUNITIES**

### **6.1 Poverty in Ban Kaew Pad Pong**

During the early stages of village settlement, there were few differences in the economic status of the villagers. With the introduction of state-operated local development policies over the past four decades, competition for economic status among villagers has increased. It was interesting that the Kaew Pad Pong villagers—whose subsistence production relied on farming and fishing—preferred to send their sons and daughters to work in other provinces or abroad to support their families. This employment paid well and strengthened the villagers' economic standing better than any local occupations.

#### **Ownership and access to the means of production**

The Kaew Pad Pong villagers had ownership rights to their farmland and were entitled to collect forest products, hunt for wild animals in the seasonally flooded forest, and fish in natural water bodies. Some villagers, who previously sold their land and moved, came back to the village landless. They earned their living by working as wage labourers, planters or harvesters. Because they were landless, they lived at the village temple.

An example of influential villagers taking possession of land was the four major families of the village. They extended their farmlands into natural forest areas, arguing that the extended plots were parts of the edges of their farmlands. Another case was the construction of a pond at the Tah Fu creek by state agencies. With the state's misunderstanding of the villagers' needs and inexperience with village ecology, the construction resulted in the loss of seasonally flooded forest and disappearance of certain fish species while some others decreased. Scarcity of natural resources impoverished the village economically.

The state's promotion of investment programs and eucalyptus plantations to replace tapioca farming all failed or suffered losses. The cow-raising scheme that provided villagers with loans to buy cows—nicknamed 'paper cows'—was another failure. The animals provided were skinny and sick. Some of them died or sold at a loss. The villagers' indebtedness caused by these programs was so large they had to turn to other employment or migrate to work elsewhere.

#### **Lack of bargaining power**

Without bargaining power to negotiate with state authorities and the village rich, poor villagers could not confirm their rights to occupy and use public land. The village head came from an important family and almost all of the villagers were related. When the village head took possession of the land and water sources, the villagers did not challenge this or make complaints to the authorities about the incident for fear of offending the village head and affecting their own family prestige. Their livelihood was deprived of an opportunity to benefit from their local natural resources. This was one of the factors contributing to poverty in Kaew Pad Pong.

#### **The National Economic and Social Development Plans**

Kaew Pad Pong, like other rural areas in the country, has been affected by government development plans. The more plans that have emerged, the more severe the destruction, poverty and conflicts. This means that the export-led development policy aimed at mass production has promoted cutting down and burning of forest to make way for cash-crop cultivation. However, the income from this production was not cost-effective. Reservoirs, weirs and irrigation canals were constructed at the expense of seasonally flooded forests and aquatic

animal resources. The production-for-sale development approach has not worked because of high input costs and low prices. Money had to be borrowed every year. That partially brought on poverty. With the rapid spread of the social and cultural globalization of the modern age into every village community, the desire for more amenities increased their expenses and their debt.

## 6.2 Poverty in Ban Na Pieng

Thai society is experiencing rapid change in many sectors including telecommunications and information. Instead of contributing to an improvement for the poor villagers, the rapid change has negatively affected their situation. The better-off group has much greater opportunity to take advantage of the economy than its lower counterparts do. Although the poor villagers economic status might be relatively better than in the past, the fact that it continued to worsen was the origin of rural poverty in Na Pieng. To be poor, according to an earlier generally accepted classification, meant that you had to earn a certain income or experience one of five conditions: (1) economic insufficiency, (2) economic inequality, (3) deprivation, (4) dependency or (5) being the cause of social problems. While the better-off group was economically and socially powerful with dominant bargaining power in politics, the poor were disadvantaged in all aspects.

Since Thailand's first implementation of its National Economic and Social Development Plan in 1961, the poor have been measured in terms their annual household income. Economists focus on better income distribution and access to means of production and resources as effective solutions to rural poverty. Poor people earned 1 119 Baht per year and the World Bank found (in 1980) that Thailand's poverty belt in the Northeast stretched through Sakonnakorn, Nakornpanom, Kalasin, Roi Et, Maha Sarakham, Surin and Si Sa Ket. Despite an improved overall picture since 1996, income distribution has deteriorated. Rapid economic growth has led to natural resources being destroyed resulting in environmental degradation and worsening income distribution.

At village level, the household poverty line starts with an annual income of 20 000 Baht. Thirty-seven poorest households of the village fell below this line. During the past 3-4 decades, the differences in household economic status were slight because each family was self-sufficient. Village production was aimed at household consumption and sharing with others, not commercial gains. Over the past 10 years, villagers produced for sale in hopes of becoming rich. The gap between the village rich and the disadvantaged widened.

With village resources (ponds and cultivation land) occupied by the village leaders, their friends and relatives, the poor had no choice but to rely on their richer neighbors. Besides being indebted to the rich and working in exchange for necessities, they had to depend on outsiders like the state and private sector. A number of villagers invested in cattle raising. The production costs were so high that they lost money and they took further loans from informal sources and the Village Fund to repay their debt. Poverty indicators based on income are shown in Table 10.

Table 10: Poverty indicators based on income in Ban Na Pieng

<b>Income (in Baht) per group per year</b>	<b>Number of households</b>
50 001 – 100 000	20
30 001 – 50 000	15
20 001 – 30 000	85
10 001 – 20 000	20
1 000 – 10 000	17
Total households in 2002	157

Subsistence farmers in the past used simple and uncomplicated farm tools. Their production was dependent entirely on human and animal labor as well as organic fertilizer. Around 1987, some villagers bought plowing pushcarts to replace buffalo and provided plowing services to other farmers. This farming method has become very popular. Although rice farming could not always be productive owing to damages caused by floods, farmers still had to carry on with it for household consumption. In 1995, agricultural extension agencies started to promote non-seasonal rice farming. More than 40 families joined the scheme. Two years later, they abandoned the experiment and it came to a complete end in 1999 because the production cost had been too high while yield too low.

In the past, rice farming was for consumption, not for sale. So was the collection of bamboo shoots and other forest products. With the introduction of the national development policy focusing on commercial production, forest products became commodities that local villagers and outsiders collected for sale. Forest produce began to decrease and became scarce. What remained fertile was freshwater fishing in Songkram River and ponds and lakes surrounding the village. Then fish catch was also for sale and conducted with modern tools; so sophisticated that some species became endangered or extinct. The catch decreased and conflict over fish resources arose to an extent that a new management system of the water sources was needed.

The villagers were divided into clusters, each of which was autonomous to manage their own ponds and lakes. Some of these clusters gave monopoly concessions to outsiders without taking into account the rights of poor villagers. Even the medium-income villagers and the rich began to earn less from fishing. Despite fewer fish, processing was undertaken so that fermented fish, smoked fish and sour fish were put on sale. Because of the decreased catch coupled with more competition, the price of fermented fish simply went down, not to mention its poorer quality resulting from fewer varieties of fish species.

Outsiders have been allowed to manage some of Na Pieng's natural resources by bidding for management concessions for village fishing grounds. A portion of the concession income usually goes to the village central fund and the rest divided among members of the village clusters, however, in one case, a village head awarded a 10-year monopoly concession for Nong Khan Chang Lake for an annual payment of 6 000 Baht. The villagers said the community had been deprived because this lake could bring in 100 000 Baht yearly.

The above phenomena were all root causes of rural poverty in Na Pieng.

## **APPENDIX 1: CASE STUDIES**

### **Educational and economic status of poor families: a case study of Mrs Rassamee Boontiam**

Mrs Rassamee Boontiam, 34, lived at No 101, Moo 9 of Ban Kaew Pad Pong. A *Thai Yor* descendant by birth, she married her husband who migrated from Nongkai Province. They had two children. Her husband is now working as a labourer in the southern province of Phuket. After her marriage in 1997, Rassamee's family stayed with her relatives. In 2002, other villagers, recognizing they were poor and landless, agreed to let her family build a house on public land at the village temple.

The single-storey house had a corrugated roof and walls made from a bamboo known as *Mai Hia*. Rassamee and her husband bought the bamboo from Don Tiew for 10 Baht each. They wove the bamboo strips together and put them up as walls. For the posts, they bought nine from villagers cutting trees in Lao Piak Forest. Her relatives helped with the house construction and Rassamee paid for equipment and food for those who helped.

Being landless, Rassamee's family had to share the rice fields with one of her father's relatives. They farmed together and shared the rice crop. Between 1997 and 2001, Rassamee's share was 10 sacks per year. Unfortunately, there was heavy flooding in 2002; the crop was too small to parcel out for each family. They had to make do with eating together.

Apart from rice farming, Rassamee also worked as a construction worker. When construction work was unavailable during dry season, she made local puddings and sold them in the village. She took out a 2 500 Baht loan from the Poverty Reduction Program. Costing around 100-150 Baht to make, the pudding produced a profit of 80-100 Baht every day. Her two children also helped make them on the days they did not attend school.

Whenever free, the children caught frogs and small toads for family consumption. Their surplus catch earned them a daily income of 20-30 Baht. She asked her senior relative for some local species of chicks and raised 20 around the house. When they were large enough, she sold them at 50 Baht per kilogram, earning about 500 Baht per year. In addition to her own income, Rassamee and her children received 1 000-2 500 Baht from her husband, which helped make their lives in the village bearable.

### **Educational and economic status of rich families: a case study of Mr Usa Boontiam**

Usa Boontiam, 48, married with four children, lived at No. 144 Moo 15 of Kaew Pad Pong Village. He owned a 14-rai (5.6-acre) farm handed down from his father. Growing rice on a seasonal basis, Usa's annual harvest was around 1 700 kilograms. Besides rice farming, he also had a garden.

He had rights to cultivate a 105-rai (42-acre) plot of land in the designated land reform zone, where he planted eucalyptus trees. His main income came from this eucalyptus plantation, earning about 73 000 Baht in its first harvest in 2000. He earned 86 000 Baht from its second cutting in 2003. Usa allocated and prepared 32 rai of his land for rubber plantation.

Usa spent his free time fishing for food. He raised ducks and chickens around the house and dug a pond to raise fish for household consumption and sale, earning about 4 000-5 000 Baht per year. Usa said his monthly income was in the range of 3 500 to 5 000 Baht, which put his

family in a rather well-do-do group and prevented them from being indebted to any group, project or bank.



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## 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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