Participatory Rapid Assessment in Phou Xieng Thong National Protected Area









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Citation

Phommasane, S., Viengkham, O. V., & Phongkhaphanh, T. (2023). *Participatory rapid assessment in Phon Xieng Thong National Protected Area* (ASEAN Biodiversity Research Report No. 2023-03). Laguna, PH: ASEAN Centre for Biodiversity.

Cover design/photo

Laurenz Cruz

Photo credits

Phou Xieng Thong National Protected Area Management Office

Printed and Published

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ISBN: 978-971-9668-08-4

Contents

Tables	iv
Figures	V
Acronyms	Vi
Executive Summary	vii
Introduction	1
Objectives	2
Expected Outcomes	2
General Information of the Area	2
Profile of Salavan province	2
Profile of Nakorn Pheng district	3
Methodology	4
Procedure	4
Implementation of Field Activities	4
Tools and Process in the Implementation of Activities	6
Results	7
NTFP Collection Sites and Community Map	7
Community Mapping Resources	8
Mapping NTFP resources of Ban Beng	8
Mapping NTFP Resources of Ban Tha	8
List and Ranking of NTFP According to Use, Food, and Sell	10
Ranking of the Main NTFP Based on Income Generation	11
Problem Analysis	12
Discussion	13
General Information on the Two Villages	13
Ban Beng	13
Ban Tha	14
Village Level	15
Village status	16
Gender	16
Follow-Up Project Activities	18
Annexes	19

Tables

1	Implementation of key activities	5
2	List of PRA study team	5
3	Comparative village profile	6
4	Harvesting sites	7
5	Seasonal calendar of Ban Beng	9
6	Seasonal Calendar of Ban Tha	9
7	List and ranking of NTFPs	10
8	Ranking of the main NTFP (food, use, and sell)	10
9	Ranking of the main NTFP based on income generation	11
10	Wealth ranking	11
11	Problem analysis	12

Figures

1	Map of Salavan province	2
2	Map of NTFP Resources of Ban Beng	8
3	Conduct of PRA in Ban Beng	8
4	NTFP map of Ban Tha	8
5	Conduct of PRA in Ban Tha	8

Acronyms

ACB	ASEAN Centre for Biodiversity
BCAMP	Biodiversity Conservation and Management of Protected Areas in ASEAN
DAFO	district agriculture and forestry office
DoF	Department of Forestry
DoNRE	district office of natural resources and environment
NPA	national protected area
NTFP	non-timber forest products
PAFO	provincial agriculture and forestry office
PRA	participatory rapid assessment
PXT NPA	Phou Xieng Thong National Protected Area

Executive Summary

The ASEAN Centre for Biodiversity, through the Biodiversity Conservation and Management of Protected Areas in ASEAN Project, assisted the Department of Forestry, Ministry of Agriculture and Forestry in implementing a baseline assessment of the nontimber forest products (NTFP) in Phou Xieng Thong National Protected Area (PXT NPA). The participatory rapid assessment (PRA) aimed to identify promising NTFP products for the market chain study, assess the status of the NTFP sub-sector at the provincial level, and describe and assess the villages to be involved in the market chain study.

The PRA was conducted in two villages in PXT NPA, namely, Ban Beng and Ban Tha. The PRA determined that Ban Beng identified rattan canes as the income source of poor families in the village. Resource management is a challenge, but handicrafts from rattan are a promising NTFP product for further study. In Ban Tha, possible NTFP products are woven mats from Teuand (Pandanus) and rattan shoots for possible future exportation. Ecotourism was also identified as a source of income, but this was mainly challenged by the investment needed to build ecotourism infrastructure.

The next steps for this project are to conduct market chain analysis of the NTFP products to develop a market information system, analyse livelihood information and data collected through the PRA, and analyse policy issues regarding NTFPs. A debriefing workshop is also recommended to present the results of the PRA, verify data, and develop an action plan.

Introduction

The ASEAN Centre for Biodiversity (ACB) assisted the Department of Forestry (DoF), Ministry of Agriculture and Forestry in implementing a baseline assessment of the nontimber forest products (NTFP) and in identifying key promising products for livelihood improvement in Phou Xieng Thong National Protected Area (PXT NPA). This was supervised by the project coordinator of the Biodiversity Conservation and Management of Protected Areas in ASEAN (BCAMP) Project in coordination with the DoF focal point, ACB protected areas expert, and NIRAS-BCAMP technical assistance team leader.

PXT NPA in the Nakornpheng district, Salavan province is in the southern border of the Kong Xedon district of Champasack province, and on its west is Thailand. During the dry season, when the water dries, 4,000 beautiful rock holds become visible interstices of the bowl of Mekong River. The goal of the participatory rapid assessment (PRA) study is to determine the promising NTFPs for adding value to create income and livelihood for local communities living in PXT NPA. During the study, it was observed that the locals were collecting wild mushrooms locally called Hetpoh (*Barometer earthstars*) in the dry area of the dipterocarp forest.

As part of this study, the PRA was conducted to collect local knowledge and information on NTFP harvesting activities. A planning workshop guidelines/participatory rural appraisal for NTFP sustainable use and development by the district agriculture and forestry office (DAFO) was used for this PRA. The two-day meeting with the two local communities and field visit was conducted on 1–7 June 2020 and was attended by 52 people composed of rattan harvesters and NTFP collectors. The first meeting was in Ban Beng and was attended mostly by women. The meeting participants were divided into two sub-groups to discuss and answer the PRA questions. The same meeting was also conducted in the village of Ban Tha. The information from these two meetings will be used to develop the NFTP market chain promotions.

Participatory rural appraisal for assessment of NTFPs was conducted in the with two villages in collaboration with the NPA division. A baseline survey with identified target groups assessed NTFPs, including the financial requirements, list of resources and products, marketing system problems, and understanding of the selected main product. The activity also helped to build awareness through a participatory approach. The PRA aimed to identify promising NTFP products for the market chain study, assess the status of the NTFP sub-sector at the provincial level, and describe and assess the villages to be involved in the market chain study.

Objectives

The objectives of the PRA assessment are as follows:

- 1. To identify the promising NTFP products for the conduct of market chain study;
- 2. To assess the situation of the NTFP sub-sector at the village, district, and provincial levels;
- 3. To describe the villages selected through PRA; and
- 4. To interview relevant stakeholders involved in NTFPs in Phou Xieng Thong, specifically in Ban Tha (Tha village) and Ban Beng (Beng village) in Lakhonepheng district, Salavan province.

Expected Outputs

The following are the expected outputs of the PRA:

- 1. Shortlist of products as the basis for the next phase of the market chain study;
- 2. Identification of local people (villages) interested in developing NFTP or rattan enterprise;
- 3. Understanding of the social, environmental, technical, and institutional contexts of a range of products; and
- 4. Formation of an interest group to undertake the next phase.

General Information of the Area

Profile of Salavan province

Salavan province is in the southern part of the country. It was part of the Champasak Kingdom, an area known as Muang Mang, inhabited by minorities of Mon-Khymer groups. Salavan province covers an area of 16,389 square kilometres (6,328 square miles). The province shares borders with Savannakhet province to the north, Viet Nam to the east, Xekong province to the southeast, Champasak province to the south, and Thailand to the west. The central part of the province is located on the Bolaven Plateau, which is a key agricultural area with Arabica coffee as the dominant cash crop. The western part of Salavan province is delimited by the



Figure 1. Map of Balavan province

Mekong River while the eastern part is delimited by the Lao-Vietnamese border.

Profile of Nakorn Pheng district

Nakornpheng is one of the seven districts of Salavan and is located in the western part of the province. It is 130 kilometres from the central of Salavan District and shares borders with Songkorn district and Thapangthong district to the north, Kongxedon to the south, Vapi district to the east, and Thailand to the west at about 71 kilometres. Nakornpheng has an area of 139,000 hectares including Road 13 covering 51 kilometres. A paddy field has an area of 15,300 hectares and the national protected area (NPA) covers around 39,101 hectares. A total of 12 villages live in the area and four of the villages live inside the PXT NPA (Ban Kaengyapeiw, Ban Phoukasy, Ban Thakanchumxoi, and Ban Donmakkeua).

Lakornpheng district has 11 village clusters with 75 villages and 9,009 households. It has a population of 52,863 with 25,530 females. About 95 per cent of the dwellers are from Lao Loum and 5 per cent are of Katang ethnic minority group. The main occupation of villagers is low land farming followed by animal raising and trading.

Methodology

Procedure

The following procedure outlines the general steps the research team took in conducting the PRA assessment:

- 1. *Conduct village orientation to introduce the objectives of the activities.* The participants were divided into two groups for the discussions (female and male groups).
- 2. *Map NTFP resources.* The villagers mapped the main areas of the forests where NTFPs were collected, the type of forests, main roads, schools, and others. The objective was to have an overview of the spatial distribution of the main NTFP resources, the distance vis-a-vis the village, and have a 'picture' of the village.
- 3. *List and rank* NTFPs according to use, as food or for selling. The participants were asked to list the NTFP collected around the villages and classify and rank them according to food, sell, and use.
- 4. Rank the main NTFP based on income generated. The main NTFPs identified by each group were ranked based on the income generated from sales.
- 5. *Determine socio-demographic profile.* The project clustered the wealth of the village in three main groups: poor, middle-income, and wealthy families.
- 6. *Conduct problems analysis.* The research team identified the main issues in NTFP management along with its underlying causes (collection, resources depletion, and others). The team also listed potential solutions and identified relevant stakeholders.
- 7. Write the activity report.

Implementation of Field Activities

The DoF and the provincial agriculture and forestry office (PAFO) selected the districts and targeted villages based on the following six main criteria:

- 1. Villages are within the buffer zone of the NPA (also ASEAN Heritage Park);
- 2. Richness of the NTFP;
- 3. Road networks and access to markets from village;
- 4. Capacity of DAFO to handle the project;
- 5. Network and cooperation with other projects working on NTFPs; and
- 6. Provincial Development Plan the poorest districts (as identified in the National Growth Poverty Eradication Strategy) must be supported by provincial authorities.

Before conducting the PRA at the village level, the study team organised meetings with the PAFO and DAFO of Salavan province. The main objective of the meeting was to inform the objectives, process, and expected outcomes of the PRA in Ban Beng and Ban Tha, which are located in the buffer zone of PXT NPA, Nakornpheng district, Saravan province.

The detailed activities of the field work are summarised in Table 1. The participants in the PRA are listed in Table 2.

Steps	Activities	Location	Date
1	Travelled from Vientiane to Salavan	Salavan	1 Jun 2020
2	Organised meeting with PAFO (Saravan and Champasack)	Sara+Cham	2 Jun 2020
3	Organised meeting with DAFO	Lakornpheng	3 Jun 2020
4	Conducted PRA at Ban Beng	Ban Beng	4 Jun 2020
5	Conducted PRA at Ban Tha	Ban Tha	5 Jun 2020
6	Organised team debriefing meeting	Lakornpheng	6 Jun 2020
7	Travelled back to Vientiane	Travel by car	7 Jun 2020
8	Data analysis	Vientiane	8–10 Jun 2020
9	Drafted activity report	Vientiane	17–19 Jun 2020

Table 1. Implementation of key activities

Note: DAFO = district agriculture and forestry office PAFO = provincial agriculture and forestry office

Table 2. List of PRA study team

No	Name	Organization
1	Mr. Teuangchai Phongkhamphan	Department of Forestry
2	Mr. Souvanhpheng Phommasane	Agro-Forestry Development Consultant Co. Ltd.
3	Mr. Oulathong V.Viengkham	Agro-Forestry Development Consultant Co. Ltd.
4	Mrs. Thongdeuang Keomany	Agro-Forestry Development Consultant Co. Ltd.
5	Mr. Bounthavy Kemkham	Provincial Agriculture and Forestry Office
6	Mr. KHamphomy Kounlavong	District Agriculture and Forestry Office

During the meeting at the district and provincial levels, the mechanics for selecting the potential NTFP products that could create income for the local communities as well as for exploring possible areas of collaboration between local authorities and the BCAMP project were discussed.

Tools and Process in the Implementation of Activities

At the village level, the study team carried out a PRA to inform the villagers about the project objectives in order to identify the main NTFPs and issues related to their management and the main constraints faced by the villagers. Three groups were identified to get the general information in each village, specifically women, elderly men, and village authorities.

Interviews were conducted with women and elderly men. The format of the interview was divided into six parts:

- 1. Mapping NTFP resources
- 2. Calendar of community activities
- 3. List and ranking of NTFP according to use, food, and for selling
- 4. Ranking of the main NTFP based on income generation
- 5. Wealth ranking
- 6. Problem analysis

The summary of the target groups shows that a total of 649 families live in the two villages with a total population of 1,961 persons. Women comprised 48 per cent of the population (Table 3).

Table 3.	Comparative village profile	
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Items	Ban Beng	Ban Tha	Total
Families	228	241	469
Population	972	898	1,961
Women	463	436	899
% of women	47.66%	48.55%	48.105%
District	Nakornpheng	Nakornpheng	
Number of interviews conducted	18	34	52

Results

NTFP Collection Sites and Community Map

During the first activity, the community members identified and mapped the NTFP resources available. The NTFP collection sites are listed in Table 4 and are shown in the community map, which was developed during the meeting. The harvesting areas were also mapped using a map created by villagers who have a lot of experience and know the collection sites very well. All villagers, especially women, complained that the production forest has decreased significantly in recent years.

NTFP	Name and Location	Density Status					
Ban Beng							
Rattan	PXT NPA	Not much					
Bamboo	PXT	Small lots					
Mushroom (Het bot)	Pakok (dry-forest)	Not much					
Wildlife and aquatics	PXT	Not much					
Wild vegetables	PXT NPA	Lots of small					
Ban Tha							
Pandanus (Teung)	Thannamphet Tintoak	Biggish					
Mushroom (Hebot, Hetlangok, Het sine, Het poh)	Lao Louang and dry- forest	Not much					
DokKachiang	Kokna-Banmai	Not much					
Bamboo	PXT NPA	Not much					
Rattan	PXT NPA	Not much					
Resin	Kokna	Not much					
Wild vegetable	PXT NPA	Lots of small					
Fish	Mekong River	Not much					

Table 4. Harvesting sites

Community Mapping Resources

Mapping NTFP resources of Ban Beng

The villagers drew the main areas of the forests where NTFPs were collected, type of forests, main roads, schools, and others. The objective was to have an overview of the spatial distribution of the main NTFP resources, the distance vis-a-vis of the village, and also to have a 'picture' of the village (Figures 2 and 3).

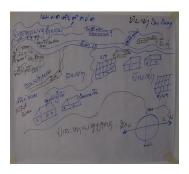


Figure 2. Map of NTFP Resources of Ban Beng



Figure 3. Conduct of PRA in Ban Beng

Mapping NTFP Resources of Ban Tha



Figure 4. NTFP map of Ban Tha The community maps (Ban Beng and Ban Tha) were developed together with the local people who participated the village level meeting. The participants also described the harvesting areas (Figures 4 and 5).



Figure 5. Conduct of PRA in Ban Tha

Calendar of Community Activities

Men and women involved in harvesting and processing NTFPs are also engaged in other activities throughout the year. Based on the discussions with the women of Ban Beng village, rattan weaving starts with collecting rattan canes at the beginning of the dry season (November) and continues up to June. Pandanus (Teung) harvesting starts after harvesting rice. Women harvest only mature leaves for weaving mats and other NTFPs such as mushroom (Hetbot, Hetpoh, Hetchin), Dokkagniang, and bamboo shoots-based season. The timetable of the activities that involve women throughout the year is listed in Table 5 and 6.

	Months/Year																							
Activity		1		2		3		4		5		6		7		8)	10		11		12	
	Μ	F	М	F	М	F	Μ	F	Μ	F	Μ	н	М	F	Μ	н	М	н	Μ	F	Μ	F	Μ	F
Rice nursery											~	~	√	~										
Rice transplanting													✓	~	✓	~	✓							
Rice harvest																	✓	~	✓	~	✓	✓		
Collect mushroom									✓	~	✓	✓	✓	~										
Collect firewood	✓	✓	✓	✓																	✓	✓	~	✓
Rattan cans harvesting	✓		✓		✓		✓		✓		~		✓		~		✓		✓		✓		~	
Bamboo cans	1		✓		√		✓		√		✓		√		~		✓		✓		✓		~	
Rattan handicraft weaving		✓		✓		✓		✓		<		~		~		~				~		✓		~
Bamboo handicraft weaving		✓		✓		~		✓		✓		~		✓		~		✓		~		✓		√

Table 5. Seasonal calendar of Ban Beng

Table 6. Seasonal calendar of Ban Tha

	Amount in Months in One Year																							
Activity	-	1	2	2	3	3	4	ļ	Ę	5	(6	7	7	8	3	Ś)	1	0	1	1	1	2
	Μ	F	Μ	Ш	М	F	Ν	Ш	Μ	Ш	Μ	F	М	н	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F
Rice nursery										<	✓	~	✓	~										
Rice transplanting													✓	~	√	✓								
Rice harvest																	✓	✓	✓	~	✓	✓		
Collecting mushroom									✓	~	✓	✓	√	~										
Cotton weaving		✓		✓		√		✓														✓		1
Collect bamboo cans	✓		✓		✓		~		✓		✓		✓		✓		✓		✓		✓		✓	
Collect bamboo shoots						✓		~		~		~		~		~		✓						
Teung weaving (Pandanus)		✓		~		√		~		~		✓		✓		✓		√		✓		~		1
Ban handicraft		✓		~		✓		✓		~		✓		✓		✓		✓		~		~		1
Collect resin	✓	✓	✓	✓	✓	✓	~	✓	✓	~	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	V
Fishing							✓		√															

List and Ranking of NTFP According to Use, Food, and Sell

The participants were asked to list the NTFPs collected around the villages and to classify and rank them according to food, sell, and use (Tables 7 and 8).

Table 7. List and ranking of NTFPs

No	Name of NTFP	Parts of the Plant		ļ	Using	
NO	Name of NTFP	Used	Food	Sell	Use	Exchange
Ban E	Beng					
1	Bamboo	Cane and shoot	~	✓	✓	
2	Rattan	Cane and shoot	1	✓	✓	
3	Wild vegetable	Top leaves and leave	1	✓		
4	Wildlife – aquatic	Whole part	~			
5	Mushroom	Whole part	~	✓		
Ban 1	Гha		•	•		
1	Pandanus (Teung)	Leaves			~	
2	Mushroom (Hebot, Hetlangok, Het sine, Het poh)	Whole part	~	~		
3	DokKachiang	Flower	~	✓		
4	Bamboo	Cane and shoot	~	✓	~	
5	Rattan	Cane and shoot	~	✓	✓	
6	Resin	Oil		✓		
7	Wild vegetable	Top leaves and leave	~	✓		
8	Wildlife and aquatics	Whole part	√	✓		

Table 8. Ranking of the main NTFP (food, use, and sell)

No		Importance Use of Local Community							
No	List of NFTP	Food (Rank)	Use (Rank)	Sell (Rank)					
Ban B	Beng								
1	Bamboo	\checkmark	✓	\checkmark					
2	Rattan	\checkmark	✓	✓					
3	Wild vegetable	✓		√					
4	Wild life-aquatic	✓		✓					
5	Mushroom	✓		✓					
Ban 1	- Tha								
1	Pandanus (Teung)		✓	√					
2	Mushroom (Hebot, Hetlangok, Hetchin, Het poh)	\checkmark	✓						
3	DokKachiang	✓	✓						
4	Bamboo	✓	√	✓					
5	Rattan	√	✓	√					
6	Resin	✓		✓					
7	Wild vegetable	✓		√					
8	Wildlife and aquatics	\checkmark		\checkmark					

Ranking of the Main NTFP Based on Income Generation

The main NTFPs identified by each group were ranked based on income generated through sales (Table 9).

Table 9.	Ranking of the main NTFP based on income generation
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No	NTFP Product	Average Price (LAK/kg)	Income Ranking		
Ban	Beng		•		
1	Rattan	Handicraft productions	50–100 units	Highest income	
2	Bamboo	Handicraft production	50–100 units	Highest income	
3	Mushroom (Het Phoh)	15,000–25,000K/kg 70 kg		Low income	
Ban	Tha				
1	Teuang (pandanu)	120,000k/unit	340 unit	Highest income	
2	Bamboo shoots	5,000k/kg	1,380 kg	Medium-income	
3	Mushroom (Het sine)	5,000–15,000k/kg	1,050 kg	Medium-income	
5	Fish	15,000–25,000k/kg	5,290 kg	Highest income	

Wealth Ranking

The study clustered the wealth of the village into three main groups: poor, middle-income, and wealthy families. The following criteria were used to describe the three groups (Table 10).

Table 10. Wealth ranking

Wealthy Families	Middle-Income Families	Poor Families
 Large low land farming Rice surplus Big house (concrete house) Cars and motorcycles Livestock High income Trading 	 Wood house Small production area rice in general Shortage of rice for 2- 4 months Hand tractor Motorcycle Medium income Livestock 	 Small farming land or no land Small house Shortage of rice during the whole year Income from labour Income from NTFPs Reliance on NTFPs for food New family and separate house from parent

Note: Both villages have the same criteria for the wealth ranking

Problem Analysis

The villagers listed the main issues in NTFP management (collection, resource depletion, and others) and the causes of these issues. The potential solutions and the relevant actors to address these issues were identified as well (Table 11).

Type of NTFP	Problems	Causes	Solutions	Actors Concerns
Bamboo	Decreasing	Lack of sustainable harvesting technique, over-harvesting	Rehabilitation Collaborative management Develop harvesting regulation by-laws Develop sustainable harvesting toolkits	DAFO, district governor and community
Rattan	Decreasing	Lack of sustainable harvesting technique, over-harvesting	Rehabilitation Collaborative management Develop harvesting regulation by-laws, Develop sustainable harvesting toolkits	DAFO, district governor and community
Fish and aquatic species	Increasing population	Electric fishing and fishing the period of fish laying eggs	Fish zoning and aquaculture	DoNRE, DAFO and security
		Reforestations, avoid using chemical	DAFO and experts	

Table 11.Problem analysis

Notes: (1) Both villages show similar situation in the problem analysis

(2) DAFO = district agriculture and forestry office

DoNRE = district office of natural resources and environment

Discussion

General Information on the Two Villages

Ban Beng

Ban Beng is located along Road 13 of the southern provinces, and the village shares borders with Ban Nong Sano to the north, Ban Dan and Ban Phone Paeng to the east, Ban Nong Phou Vieng to the south, and PXT NPA to the west. It is around 135 kilometres from Salavan province to the west. The village was established around 78 years ago (1942). Currently, there are a total of 288 families and a population of 972 individuals, of which 47.66 per cent or 463 are women.

The main occupation of the villagers is agriculture (rice, rubber, and cassava). NTFP collection is mainly for domestic consumption, and the excess is used to get extra income for families. The existing rattan handicraft producer group currently comprises 38 families or 13 per cent of total number of families in the village. The group started working on rattan handicrafts in 2005 and was officially formed into a rattan weaving group by the district governor in early 2020. Education and health facilities are limited. There is only one primary school with four teachers. There is only one teacher handling the Grades 4 and 5. There is also no clinic in the village, and Nakorn Pheng is the nearest district with a hospital. The primary livelihood of the people is rice production, which is weather-dependent. Thus, almost every year, some families face scarcity in rice.

People's wealth is primarily manifested in the ownership of livestock (buffalo, cows, and poultry). According to the group discussion, the villagers lost an average of 400 hectares of production forest due to the local government concession to a Vietnamese company for rubber plantation. They mentioned that the livelihoods of people depend on NTFPs in the PXT NPA, and their standard of living has been improving much more than before. Consequently, they can access and control forest resources, gain access to facilities such as roads, pumps, school, and other facilities. All of them are proud to have a harmonious and stable life and never thought of leaving their home. Before the COVID-19 pandemic, the young people in this village went to Thailand to sell so they could send money to their parents.

According to the village chief (Nai Ban), a key obstacle to village development is the illiteracy rate, which has an average of 25 per cent for the total population. Women also get lower education than men and have a higher illiteracy rate. Based on the results of discussions with the villagers, Ban Beng is rich in NTFPs, and rattan canes are important due to handicraft weaving that started in 2005. Currently, this rattan producer group has 38 members who are interested in working on rattan commodity production to create stable jobs for low-income families.

The main constraints for the rattan producer group are the lack of ability to make modern rattan production designs including effective and efficient use of rattan cane raw materials. However, they could not meet market demands due to the lack of advanced technology for stripping rattan and oven-drying. At the same time, processing of wild rattan is also limited because the villagers lack toolkits for sustainable rattan harvesting. Currently, the villagers have to walk at least 20–50 kilometres from their village to PXT to harvest the wild rattan canes.

Summary

Based on the results of the group discussion, Ban Beng villagers identified rattan canes as a major income source of poor families. At the same time, they are growing rattan sustainably in dipterocarp forests. This addresses the concern in the decreasing rattan cane production in PXT NPA. The problem of supply in raw materials is becoming a preoccupation. Many villagers felt that the government and development projects should have a more active role in resource management and plantation. The chief villager expressed the need for the government to be more effective in controlling illegal slash-and-burn for planting cassava.

The rattan species, which is vital in the livelihood of the villagers, grows in the dipterocarp forest (dry forest) and locally called *Wai Thok* or *Calamus solitaries.* The crop rotation for harvesting Wai Thok is estimated at about seven to 15 years. This rattan species is suitable for making handicraft products.

Ban Tha

Ban Tha is located along the Mekong River and opposite of Ban Mouang; and TamBone Samlong, Amper Phoxay, Oubonetatsathany in Thailand. The village shares borders with Ban PhouSyKeo to the north, Ban PhouKaSy to the east, Mekong River to the south, and Don MakKeuang to the west. It is around 35 kilometres from Lakorn Pheng district to Ban Tha (Mekong River) by buffalo road. This village was established around 200 years ago (1820s). It has a total of 214 families, with a total population of 898 people, of which 436 are females (48.52 per cent). There are two ethnic minorities (Katang and Lao Loum) in the village.

The main occupations of the villagers are in agricultural activities (rice and cassava seasonal farming) and NTFP collection, mainly for domestic consumption with the excess used to generate additional income. Education and health facilities are limited. There is one primary school and one upper secondary school with 12 teachers. There is no clinic in that village and villagers must cross the Mekong River with a boat to get to the hospital in Ban Mouang; TamBone Samlong, Amper Phoxay, Oubonratsathany, Thailand.

The livelihood of people involves rice production, which is weather-dependent. The main source of income is from NTFPs, small livestock, and fishing for trading. There are two women traders in the village. The main sources of income are Teuy (Pandanus) handicraft weaving, bamboo shoots, and mushroom for cash income. Bamboo, wild vegetables, and wildlife are the main sources of food for the villagers. There is no village organisation supporting the market for NTFPs. The villagers have to walk more than 3 kilometres to access the forest with enough NTFP resources. Rice yields from paddy predominantly depend on the amount of rainfall. In a good rainfall year, rice products may meet the needs of the villagers. In contrast, in a bad rainfall year, the rice products will fall and it will be sufficient for only two to three months of the year and collection of NTFP will increase.

Summary

Through the discussions with the Ban Tha villagers, the study team and the participating villagers identified two main potential products from NTFPs — selling Teuang (Pandanus) weaved mats, growing rattan shoots under dipterocarp forest for possible future exportation of rattan shoots to Thailand, as well as ecotourism in PXT NPA. PXT NPA during the dry season is a very beautiful place with 4,000 rock holds in the bowl of the Mekong River.

According to the final list of the villagers, rattan shoots growing under the forest and idle land will help improve biodiversity around PXT NPA. Rattan could be an alternative source of income for the community if sustainable harvesting is practiced, which can supply for up to 35 years.

Exploring ecotourism also has high potential, but the villagers did not consider this due to the capital investment needed to develop the infrastructure. Building the capacities of the local people to serve as service providers also takes time.

Village Level

In both villages, the villagers are subsistence farmers; rice deficiency occurs for several months, which is a major problem. These villages have access to forest resources in the PXT NPA. Therefore, during the rice shortage period, the poorest members of the community collect forest resources for domestic food consumption and sell the excess for additional income.

Village status

These villages went through the land allocation process in 1995–1996 and were preregistered as NPA. The Lao PDR government announced PXT as an NPA in 1992–1993. All the villages' land allocation was cancelled, and almost all villages living in PXT NPA lost their rights to the land. Each household was given rights to agricultural lands in the NPA. No formal land titling was given.

Ban Beng also lost their production forest as the local government gave their production forest to a Vietnamese company as a concession for a rubber plantation. Currently, all villagers have access to the national protected area forest for NTFP collection.

Other features of the villages are as follows:

- 1. Ban Beng is located on main roads, and Ban Tha is located along the Mekong River opposite Amper Phoxay of Thailand.
- 2. Electricity is available in the two villages.
- 3. Ban Beng has a primary school. Girls and boys attend Grades 1–3. However, upon reaching Grade 5, most girls drop out to attend to their household needs. The literacy rate is very low, and poor education (no writing, reading) is a barrier to development as it will be difficult for women and men to participate in trainings, and to develop and manage business. Ban Tha has both primary schools until upper secondary school.
- 4. Both villages have no clinic. Villagers need to go to the other towns for medical treatments. Ban Beng is more convenient than Ban Tha in terms of access to medical treatment. Ban Tha villagers need to cross the Mekong River by boat to get to Thailand for medical treatment.
- 5. In the two villages, there are two main ethnic groups, Lao Loum and Katang.
- 6. Almost all villagers are subsistence farmers and experience rice deficiency for several months in a year, which is a major problem. All villages have access to forest resources at PXT NPA. Therefore, during rice shortage, the forest provides an alternative source of food and nutrition, especially for the poorest households in the village. The villagers collect forest resources for food, domestic use, and often for sale.

Gender

The gender-based division of labour shows that women are mainly responsible for family tasks (domestic work and child rearing), whereas men are responsible for non-domestic, economic tasks and other socio-cultural activities in the economy as their priority roles and assignments. The pattern of division itself generates the root for the gender-based power differences and inequalities, and further produces and reinforces the gender division of labour. Women are found doing low-prestige, hazardous, arduous, monotonous, repetitive, and dirty jobs such as weeding, harvesting, and transplanting. In the villages, people have similar perceptions about women's involvement in project activities. In general, villagers think that if there are activities where gender issues are raised, they should be done through the Lao PDR Women's Union, and other activities should be done with other departments and preferably have male involvement. At times, some resistance is

found; for instance, when inviting women to join meetings, the local authorities send invitations to join project activities to men only.

The result of the PRA study showed that Ban Beng is the only village with an existing developed rattan handicraft marketing group and expressed great interest in the project to improve market sales, skills in designing, and product development for other potential NTFP markets. Incomes from the handicraft sales in Ban Beng are estimated to average between USD 300 to USD 500 per family per year (for 37 families). Ban Tha has an existing Teuy (Pandanus) handicraft producer group and is estimated to earn an average of USD 200 to USD 300 per family per year (for 85 families).

Villagers emphasised that they have to go further and further inside PXT NPA to collect NTFPs due to the loss of their own production forests. On the other hand, currently the main causes of the NTFP depletion identified by the villagers were over-harvesting (legal and illegal), forest fire, logging, practice of slash-and-burn for shifting cultivation (e.g., cassava plantation), and registration of lands as NPA by the government.

The result of the PRA shows the following common issues raised by the two villages:

- 1. Resource depletion of commercial NTFPs (rattan, bamboo, mushroom and wild vegetable, among others). It is difficult to buy NTFPs such as rattan from other villages.
- 2. Prices are often too low and unstable for commercial NTFPs (handicraft products, resin).
- 3. Prices are controlled by the trader, and often villagers cannot sell to another trader. Villagers want more flexibility.
- 4. The demand for NTFPs is seasonal.
- 5. Not enough material for rattan handicraft production. Resources are becoming scarce.
- 6. Villagers have to walk far to collect rattan in PXT NPA.
- 7. Low quality of the raw material.
- 8. No skills in terms of new designs and no equipment.
- 9. Lack of policy support to attract private sector investment on rattan handicraft.
- 10. Rattan cane's supply chain is not sustainable.

Follow-Up Project Activities

The following activities will be carried out after the information and data collection:

- 1. Conduct market chain analysis of the short-listed NTFP products (rattan canes and rattan shoots).
 - Conduct survey on the potential to develop an NTFP market information system.
 - Conduct in-depth analysis of the livelihood and NTFP data and information collected at the village's level.
 - Analyse policy issues related to NTFP Marketing in the two provinces (Salavan and Champasack).
- 2. Organise debriefing workshop at Lakorn Pheng district, Salavan province.
 - Present the results and outcomes of the PRA and market analysis for rattan shoots and rattan canes (handicraft).
 - Verify and check data.
 - Develop participatory project action plan and set up the budget.

Annexes

Annex 1. Field Work Agenda

Time	Tittle	Method	Responsible
1-7/06/2020	Develop field forms and toolkits and submitted to DoF (Project	t Coordinato	or)
Day 1: 1/06/	2020 Travel from VTE to Napong-Saravan province		
Day 2: 2/06/	2020		
a.m.	Meeting with Saravan's PAFO Self-introduction, objectives and process of the PRA field works	DOF + AFC team	
p.m.	Travel Lakhonepheng district meeting with DAFO Self-introduction, objectives and process of the PRA field work Travel to Ban Tha and Beng to make appointment with village authorities and villagers	By car	DoF, AFC, PAFO, DAFO
Day 3: 3/06/	2020; Organised village workshop and conduct PRA at Th	a	
8:30–17:00	Organise meeting with villagers Introduction objectives of PRA, flows and expected outcomes Divided sub-group discussion (group of female and group of male) Short-listed NTFPs potential product Selection NTFP promising product for next step to conduct market chain study (Value chain gap analysis) Summary and wrap up		PAFO, DoF, AFC
Day 4: 4/04/	2020; Organised village workshop and conduct PRA at Ba	n Beng	
8:30-17:00	Organise meeting with villagers Introduction objectives of PRA, flows and expected outcomes Divided sub-group discussion (group of female and group of male) Short-listed NTFPs potential product Selection NTFP promising product for next step to conduct market chain study (Value chain gap analysis) Summary and wrap up		PAFO, DoF, AFC
Day 5: 5-6/0	6/2020; Organised team debriefing workshop		
8:30-12:00	Verification checking data Final identify the potential NTFP product for next step conduct market chain study or Value chain gap analysis Feedbacks and recommendations for PAFO and DAFO Summary and wrap up		PAFO, DoF, AFC
13:30- 17:00	AFC summary data and analysis information Re-collecting missing information Final summary data		AFC
Day 6: 7/06/	2020; Traveling back to VTE		,
July 20 th to	25 th , 2020 drafted PRA report by AFC		

Annex 2. PRA Forms

Form 2.1 General village infor.mation

Ge	neral information Form
1.	 When the village was established and where are the inhabitants from? Total number of houses in the village: Total number of families in the village: Female:
2.	Are there men or women in the village who cannot speak Lao language?
3.	What is the level of literacy amongst men, amongst women?
4.	How many schools are there in the village?
5.	How many teachers are there in the village?
6.	Has anyone from the village gone for higher studies elsewhere?
7.	What infrastructure does the village have? (Water pumps, electricity, all weather or dry season 8. road, cell phone reception etc.)
8.	Does the village have all season road access or only dry season?
9.	 Economic characteristics: How many different ranks of wealth are there in the village? Which wealth rank has the most number of households? What kind of traders/buyers come to the village and what do they buy? Where is the nearest market? How often do men and women go to the nearest market or the further markets such as the provincial capital? What do villagers buy in the district town? How much do they spend on purchases in one visit Are there any existing enterprise or trade activities in the village? Are there any shops? How did they start the shops? What do they sell? Where do they get the supplies from? Does this village have any unique characteristics such as tourism attractions or experience with the collection or production of a product?
10.	 Social and institutional characteristics: How many community-based groups are there in the village? What are they? Who are the leaders, when were they established? Are there any savings and credit groups? Who are the influential people in the village? (Government, business people, teachers, religious leaders etc;) Are there any conflicts within the village? What are the problems or threats to the village from outside?
11.	 Vulnerabilities What do villagers say are their most serious challenges? How can income from village-based enterprises help them overcome some of those challenges? Who are the villagers who could benefit the most from earning additional income from VBED' (This is your target group)
12.	 Description of the economic situation in the village How many different wealth ranks are in the village? What are the criteria that define each economic rank in the village? If yes, please write in the box below

Form 2.1 (continued)

G	Form											
Criteria	Criteria High rank Medium rank Low rank											
mple of criteria:												
 number of cows 												
 condition of the h 	nouse											
• equipment such	as tractor											
 How many villag Do all household based on the eco products are mo Are there any co What are the ma Are NTFP collec Where are house How is the water What kind of agr households have What is the aver 	promic situation of the fare important for the liveli nflicts with other villages in tree species in the PF ted from outside the PF, sholds obtaining fuel wo availability in the village	the forest? Are there differer amily? Are there certain sea bood strategy of the families s using the PFA? FA? A (such as from farmer's fiel od from? e? How many wells are there hs are there? Is it Sweden o s per family?	asons where forest s? ds)? e?									

Form 2.2 Gender desegregated seasonal calendars of activities for one product

Ask the villagers to select the 10 most important activities in the year on farm, in the forest or in the community. Then help them in early seasonal calendars.

	Months of the Year (or specify only use seasons)																							
Activit y	1		2	2		3	4	4	ţ	5	(6	7	7	8	3	Ç)	1	0	1	1	1	2
Produ ct	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	М	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F

Form 2.3 Family wealth ranking

Village:	Date:	Distric	t									
Province												
Facilitator												
 To investigate perceptions of wealth differences and inequalities in a community To identify and understand local indicators and criteria of wealth and well-being To map the relative position of households in a community 												
Ranking	High Economic Group	Middle Economic Group	Low Economic Group									
Name												
Total number												
Criteria	 Enough rice around the year They have hand tractor Good house High income 											

Form 2.4 Ranking income from NTFP

Village:	Date:	District:		Provinc	e:
Facilitator:				•	
Types	of incomes	Sc	ores Ra	anking	Percentage (%)
Bamboo					
Rattan					
Fish and aquatic spec	ies				
Livestock					
Crops					
Handicrafts					
Cardamoms					
Rice issue (there can I	be rice shortage or sur	olus)			
Others					
Total					

Form 2.5 Ranking an abundant of NTFPs resources

Villa	ge:	Date:	District:		Province:					
Facilitator:										
No		Parts of the plant		U	sing					
No	Name of NTFP	used	Edible Sell		Use	Exchange				
1										
2										
3										
4										
5										

Form 2.6 Ranking important of NTFP species

Village:	Date:	District:	Province:	
Facilitator:				
Bamboo				-
Rattan				
Fish & aquatic species				
Mushroom				
	Bamboo	Rattan	Fish & aquatic species	Mushroom

Form 2.7 Mapping of the products

A social map that was drawn by the residents, showing the social structures and institutions found in an area. It can also point to the social and economic differences between the households. (use marker pen for drawing pictures where people collect NTFPs).

Form 2.8 Ranking of main NTFP harvesting areas

Village:		Dat	e:		District:		Province:	
Facilitator:								
Areas of Harvesting	Bamb	000	Rattan	Fish & Spe	Aquatic cies	Mushroom	Total	Ranking
Phou kor								

Form 2.9 Ranking of NTFP decreasing

Village:	Date:	District:	Province:
Facilitator:			
NTFP Species Decreasing	Scores	Ranking	Percentage (%)

Form 2.10 Collecting information of NTFPs which harvesting from the forest

Village:			Date:			District:			Province:		
Facilitator:											
NTFP Species	Place of Harvest		vidual	Harvesting in Group	Sper fo	ne Iding or vest	Amount of Harvest/ Time	Kợ Un		Frequency of Harvest per Year	Total

Form 2.11 NTFP problems analysis

Village:	Date:	District:	Pro	Province:						
Facilitator:										
Type NTFP	Problems	Causes	Solutions	Actors Concerns						
Bamboo										
Rattan										
Fish & aquatic species										
Cardamoms										
Mushroom										

Form 2.12 Summary information of NFTP harvesting

Village:		Date:		District:		Province:					
Facilitator:											
NTFP Species	Part of Harvesting	Technique of Harvesting	Seasonal	Harvesting Age	Rotation of Harvesting	Part of Regeneration	Impact for Threat				
Bamboo											
Rattan											
Mushroom											

Form 2.13 Tool for the analysis of existing conflicts over natural resources

Village:				District:			Province:		
Facilitator:									
	Land Use Types					Changes f		Options	
Resource & Product	HH	Village Forest	National Forest or Pasture	or Users Connic		Trends wh Indicate to Reso Sustain	Threats ource	for Regulating Management Systems	

Form 2.14 List of products, compiling existing information indicating which products need to be eliminated

Villa	age:			Date			District:		Province:			
Fac	Facilitator:											
No.	Product	Parts of Plant Used		ison of lection	Food / Medicine/ Housing/ Clothing	Processing & Trade (Volume & Price)	Actively	Gender Roles in Collection, Processing, Trade	Regulations or Bans on Collection	Decide if the Product Should be Eliminated and Why		
1												
2												
3												
4												

Form 2.15 List of main products with commercial potential and ranking according to food, sale, and use

The participants were asked to list the NWFPs collected around the villages and to classify and rank them according to food, sale, and use.

Villag	le:	Date:	District:	Province:
Facili	tator:			
No List of NTFP		Imp	ortance Use of Local C	ommunity
NO	List of NTFP	Food (Rank)	Use (Rank)	Sell (Rank)
1				
2				
3				
4				
5				

Form 2.16 Ranking of main products based on income generation

The main NWFPs identified by each group were ranked based on income generated through sales.

Villa	ge:	Date:	District:	Province:							
Facil	Facilitator:										
No	NTFP Product	Average Price in LAK/kg	Quantity Sales	Income Ranking							
1											
2											
3											
4											
5											
6											

Form. 2.17 Ranking product by scores and percent

Village:	Date:	District:	Province:						
Facilitator:									
Dreduct	Main Product/Selected Products								
Product	Score	Ranking	Percent (%)						
1									
2									
3									
4									
Total			100%						

Form 2.18 Form for compiling market information about products

Village:		Date:			District:			Province:				
Facilitator:	Facilitator:											
Products	Harvesting Volume (kg, liter, etc.) ¹	Time of Harvesting & Method of Storage	Main Constraints of harvesting	Processing	Farm Gate Price ²	Transport Cost to Local Markets		e at the rkets	Main Constraints for Marketing the Products	Notes		
1												
2												
3												
4												

Notes: ¹ Should indicate which day, month, or year and which season of production or harvesting ² Should also indicate who the buyers are and for which markets

Form 2.19 Products selection table

Village:	Date:		District:			Prov	Province:			
Facilitator:							· · · · ·			
Cri	Products									
Market/Economy	,									
Raw materials supply										
Market potential										
Constraints to business entry										
SUBTOTAL										
Resource manag	Resource management/Environment									
Availability (in t										
Availability (in space)										
For forest products for only:										
Regenerative potential										
Impact of harvesting on the survival of species										
For farm products form only:										
Time from planting to harvest										
SUBTOTAL										
Social/Institutional										
Contribution to incomes										
Experience with the product										
Gender impact										
SUBTOTAL										
Science and Tecl	hnology	<u> </u>								
Suitability for ru processing loca	ural entrepreneurs: ations									
	ural entrepreneurs: nnology required									
Human resourc	ces/skills, expertise									
SUBTOTAL										
TOTAL										

Form 2.20 List of representatives of the interest groups

Date:									
Facilitators:									
Product:									
No	Name	Village	Education Level	Official Position/ Experience					

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ISBN: 978-971-9668-08-4