MARKET ANALYSIS

ON VALUE CHAINS &OPPORTUNITIES OF

TARGET CCA VILLAGES

XE BANG HIENG RIVER BASIN

SAVANNAKHET PROVINCE, LAO PDR

Economic Research & Development

Implemented by:

Integrated Water Resources Management and Ecosystem based Adaptation in Xe BangHieng River basin and Luangprabang City

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I. Introduction, Context and Objective

The Xe Bang Hieng River Basin is located in the central part of Lao PDR. The total area is 19,801 square kilometers which is covered by four provinces such as Savannakhet, Saravan, Khammouan and Sekong provinces. Most of the area of the Xe Bang Hieng Revier Basin is covered by Savannakhet provinces with 86% of the total area. The basin's fertile lowlands play an important role in sustaining the livelihoods of local communities, fostering a strong agricultural tradition. The basin is home to diverse communities that rely on natural resources for their livelihoods. However, these communities are facing increasing challenges due to environmental degradation, climate change, and limited economic opportunities. Diversifying and developing alternative livelihood options is crucial for ensuring the long-term sustainability of these communities. Recognizing these challenges, conservation efforts been initiated to protect the basin's natural resource and promote sustainable development.

The UNDP-GEF LDCF "Integrated Water resources Management and Ecosystem-based Adaptation in the Xe Bang Hieng River Basin" aims to support the government of Lao PDR to promote the integrated management of land and water resources at target sites in the Xe Bang Hieng River Basin and Luang Prabang city. The project aims to increase the climate resilience of communities to the impacts of floods and droughts. Among the assignment`s objectives were to inform the project's livelihood interventions and support, which aims to shift practices from upland slash and burn agriculture (within and around protected areas) to alternative practices that are climate resilient. One of the critical task was market analysis whose purpose was to inform diversified and alternative livelihood activities in targeted communities in Xe Bang Hieng River Basin. The assessment specifically sought to analyze supply chains for climate -resilient crops, livestock, and farming inputs; assess economic impact and market barriers; and recommend mitigating strategies to address the barriers. Therefore, assessment of marketing systems was necessary to identify main actors thought out the supply/value chain, understand their functions, interactions and requirements to improve the market chain and develop further the identified value chains. The results of the study would help to define the priority of the products from each community and promote the production of products to generate more income and living standards for targeted communities.

Xe Bang Hieng River Basin of Savannakhet province was identified as the project site and market analysis involved commodities in three districts, specifically, Xonnabouly, Sepone and Nong districts,with focus on the 5 target Community Conservation Agreement villages. The market analysis also benefitted from the results of initial engagements in all 15 target villages and specifically the 5 target CCA villages. The results (explained further in the results below) laid the rationales for focusing the analysis on specific products that included cassava, cattle, pigs, vegetables and broomgrass (a Non-timber forest product, NTFP).

1.1. Objectives

Market analysis aimed to identify and assess the potential of diversified and alternative livelihood activities in the targeted communities in the Xe Bang Hieng River Basin, specifically the 5 CCA villages. In order to achieve the assignment, it was essential to collect basic data thought out the market chain in order to identify main actors in the value chain and understand their function, interaction and requirements. The specific objectives were:

- Identify and characterize existing livelihood activities in the target communities (the main actors in the market chain for climate -resilient crops, livestock, and farming inputs);
- Understanding the market situation (seasonality, volume, pricing, purchase condition and regulations);
- Assess the feasibility and potential economic viability of identified livelihood options;
- Develop recommendations for promoting and supporting of diversified and alternative livelihoods. The socio-economic and ecological contexts of the 15 target villages are identified, localized and analyzed with prioritized focus on the 5 target CCA villages;
- The communities and other stakeholders are prepared and engaged in the whole process and the future work sessions;
- The information and analysis produced (in both Lao and English languages) through this market analysis and its supportive session/task 0 were structured to guide the design of subsequent sessions/tasks relevant to target Savannakhet communities.

1.2. Expected Outputs

The market analysis was expected to produce the following outcomes:

- A comprehensive understanding of existing livelihood activities and market opportunities in the targeted CCA communities;
- Mapping of marketing chain showing main actors and flows of volume, pricing system and purchasing condition related to trade;
- Characterization of economic impact and market barriers for the identified commodities on the targe CCA communities;
- Identification and assessment of promising diversified and alternative livelihood options;
- Recommendations for promoting and supporting the uptake of identified livelihood options.

II. Methodology

Based on the debriefs from initial engagements with the team, the market analysis was adapted to apply mixed-approaches, combining primary and secondary data collection while integrating gender sensitive approach. The stakeholder questionnaire development, training of team enumerators, pre-test with the LCG-GRET team, data collection (village and district level), data entry and data analysis was co-developed and supervised by the team and deputy team leader along with the lead consultant. Field implementation involved:

- Mr. Sian Phommaluesa, Session/Task 1 Market Analysis lead.
- Mr. Lamphong Khanthalivanh, Community Engagement and Gender specialist supporting field-based interviews.
- Project/client government partners: LWU, DonRE/DWR, DOIC, DAFO. To ensure women focus group was led by women, we sought the involvement of women staff from the relevant districts' LWU and DOIC.

Step 1: Data collection as for Pre-test of questionnaires

The development, training and pre-test of questionnaire with LCG/GRET team was conducted in Vientiane Capital. The objective is to better understand the scope of the questionnaire and for the session/task 0 members to provide feedbacks based on their in the field experience to

better fit with the target communities. The pre-test with the LCG/GRET team and subsequent introduction to district project partners pre-field implementation was conducted to ensure the questionnaire wordings and inquiries could be understood by interviewees. Pre-field introduction of the questionnaire was introduced to district project partners before village interviews were conducted.

Step 2: Selection of studied sites and sample size

The study was conducted in three districts of Savannakhet province where five CCA villages had been pre-selected by the project (see table1). The villages were chosen in consultation with project`s district partners In each CCA village, a village FGD involving as many villagers as possible was held in each CCA village to obtain general information of the existing livelihood activities. Subsequent household interviews (10) per CCA village were conducted wherein interviewees were selected while considering equal gender representation, involvement in the products of interest, recommendations by village authorities, and willingness to be interviewed. The number of interviews per village (10) was designed to provide adequate sample size while maintaining a stringent market analysis schedule and time allotment.

Step 3: Data collection

The data collection was conducted in June 2024. In each CCA village, the data was collected through the initial village focus group discussion to obtain general village livelihoods information. It was followed by 10 household representations that are had been identified to be involved in the sale of identified market analysis products. The interviews also identified and verified the other market chain actors that were previously identified through engagements with the districts' DOIC and LWU.

Following the village-level interviews, district level interviews were conducted with identified market chain actors (Collector, Processor, Wholesaler, and Retailer) for each product. The interviews' guidelines were detailed in Annex 1 and structured to provide the following market information:

- Identified commercialized products include farm gate prices;
- Applied production method and technical capacity;
- Demographic of producers in different products (crops and livestock);
- Supply information (types of suppliers, volume of purchase, price, etc.);
- Selling information (types of customers, volume of sales, price, etc.);
- Price mechanism and transaction cost, and producer-trader negotiations;;
- Linkage between actors;
- Problems and challenges encountered on production and organized commercialization of the products.

Villages	Families	Pop	No.cassava (HH)	No.Cattle/ Buffalo (HH)	No.Pigs (HH)	No.Broom-grass(HH)	Other activities (HH)
Kaenghouapa (Sepone)	170	714	15(2023) 81(2024)	25	71	136	Paddy rice (20); Upland rice (150); Goats (10);Bamboo (106)

Thamae (Sepone)	152	672	3(2023) 18(2024)	70	7	121	Paddy rice (57); Upland rice (95)Goats (40);Bamboo (136); Mushroom (15)
Tangalai (Nong)	90	450	90 (2023) 90 (2024)	74	35	20	Paddy rice (37); Upland rice (53);Goats (27)
Saveu (Nong)	119	164	0(2023) 164(2024)	104	95	119	Upland rice(119); Goats (20)
Mueanghong (Xonnabouly)	202	893	160(2023) 190 (2024)	140	40	0	Paddy rice (202); Goats (30)

Table 1 *Basic data of target CCA villages recorded during Market Analysis Village FGDs, 2024*

CCA Villages interviewees			Interviewees' Involvement in identified Value chains					
District	Village	Gender	Cassava	Cattle	Buffalo	Pig	Broom grass	Other Livelihood sources
Sepone	Kaenghouapa	Male (7)	3	1	2	1	4	General wage labor; Sun paper company; Fish and wild vegetables in Sepone market; construction labor
	Kaenghouapa	Females (3)	1	1	0	1	2	1 lack any livelihood
	Thamae	Male (6)	2	2	2	3	4	Grocery shop; General labor; Labor for banana plantation
	Thamae	Female (4)	2	1	0	1	4	General labor; Labor for rice planting and harvest
Nong	Tangalai	Male (5)	5	3	1	4	0	Hired labor for weeding
	Tangalai	Female (5)	5	4	0	3	1	Hired labor for weeding Selling vegetables
	Saveu	Male (6)	6	5	0	6	6	
	Saveu	Female (4)	4	2	0	2	4	
Xonnabouly	Muanghong	Male (5)	5	3	1	1	0	
	Muanghong	Female (5)	4	5	0	1	0	

Table 2 *Villagers interviewed in 5 target CCA villages (29 Males, 21 females; 10 villagers per CCA village)*

Types of actors	**Cassava marketing chain**	**Cattle marketing chain**	**Pig marketing chain**	**Vegetable marketing chain**	**Boomgrass marketing chain**
Collector (Males)	2		1		2
Collector (Females)			3		

Processor (Males)	1	1			
Processor (Females)					1 (Viet)
Wholesaler (Males)	2	2			-
Wholesaler (Females)					1 (Viet)
Retailer (Males)			1		
Retailer (Females)		1	3	4	

Table 3 *Market Chain actors interviewed in Sepon district*

Types of actors	Cassava marketing chain	Cattle marketing chain	Pig marketing chain	Vegetable marketing chain	Boomgrass marketing chain
Collector (Males)	2	1			3
Collector (Females)		2	1		
Processor (Males)					
Processor (Females)			1		
Wholesaler (Males)	2	-			
Wholesaler (Females)					
Retailer (Males)	-	1			
Retailer (Females)		2	1	3	

Table 4 *Market Chain actors interviewed in Nong district*

Types of actors	Cassava marketing chain	Cattle marketing chain	Pig marketing chain	Vegetable marketing chain	Boomgrass marketing chain
Collector (Males)	6				
Collector (Females)		2			
Processor (Males)	1				
Processor (Females)		2			
Wholesaler (Males)	2				
Wholesaler (Females)					
Retailer (Males)	-				
Retailer (Females)		3	1	2	

Table 5 *Market Chain actors interviewed in Xonnabouly district*

Step 4: Data analysis

Collected data was subsequently entered into Excel for analysis. Qualitative analysis was conducted on interviews with project's local government partners, individual interviews and private sector interviews using thematic analysis to characterize each value chain, market actors, market mapping, and identify potential actions for villagers' better integration into the value chains.

Quantitative data analysis was conducted to assess market potential, feasibility, and economic viability of livelihood options.

Finally, by cross checking and integrating results from Session/Task 0, characterization of the products' value chains at the provincial/district scale as well as the potentials at each specific target CCA village are identified.

III. Results: Session/Task 0 results relevant to Market Analysis

Qualitative village meeting conducted in the month May to June of involving all 15 target villages obtained the following information. The 5 specific target CCA villages information are shared below.

Village	District	Pop.	Female	Households	Families	Ethnicity	Km to district capital
Kenghouapa	Sepone	938	410	121	200	Tri	5 kms
Thamae	Sepone	674	334	110	145	Mankong	10 kms
Tangalai	Nong	482	220	71	95	Taoy	18 kms
Saveu	Nong	550	265	89	127	Mankong	16 kms
Meuang Hong	Xonnabouly	1115	567	209	378	Lao	46 kms

Table 6 *Demography, ethnicity and distance to district capital of the CCA villages*

Village	District	Upland rice	WS paddy rice	DS paddy rice	Cassava	Cattle production	Other identified livelihoods
Kenghouapa	Sepone	100%	35%	0	50%	50-60%	Wild vegetables (consumption); broomgrass (sell)
Thamae	Sepone	100%	50%	0	50%	>50%	Wild vegetables (consumption)
Tangalai	Nong	100%	40%	0	Nearly all	50%	Broomgrass (sell)
Saveu	Nong	100%	5%	0	80%	30-40%	Broomgrass (sell)

Meuang Hong	Xonnabouly	0	100%	0	70%	100%	Wild vegetables (consumption); limited vegetables on river banks

Table 7 *Proportion of families/households involved in the main cropping, animal productions and notable livelihoods (WS: wet season; DS: dry season)*

Village assessment also identified villagers' identified mpacts of extreme climatic events on their economy and life. Flood impact is minimally felt in the 4 target upland CCA villages in Sepon and Nong, but also in the lowland Meaunghong village in Xonnabouly. However, drought and irregular rainfall have significant impacts in all target CCA villages, impacting their daily life and agricultural-based livelihoods during the dry season.

Village	District	Flood impact	vs	Drought/Irregular rainfall impact
Kenghouapa	Sepone	+		++
Thamae	Sepone	++		++
Tangalai	Nong	+		++
Saveu	Nong	0		++
Meuang Hong	Xonnabouly	+		++

Table 8 *Comparison of perceived impact (by the villagers) of extreme climatic events*

Finally, accessibility to flat/lowland areas compare to more sloppy/mountainous areas for target CCA villages were identified. The information shed light into villagers' access to lands used for agricultural, livestock and other livelihood purposes.

Village	District	Flat/lowland areas	vs	Sloppy/ mountainous areas
Kenghouapa	Sepone	large		limited
Thamae	Sepone	limited		large
Tangalai	Nong	extended		significant
Saveu	Nong	limited		large
Meuang Hong	Xonnabouly	Mainly		none

Table 9 *Comparison in terms of topographic characteristics between the upland target villages (flat-lowland areas vs sloppy/mountainous areas).*

<u>Vegetable production systems in 5 CCA villages</u>

In all villages, vegetable gardens were established in dry season on the river banks or/and in the homeyards. The produce mainly consumed by the family and covers a large range of vegetables used in the Lao traditional meals (chilli, onion, garlic, long bean, eggplant, cucumber, coriander, mint, salad, Chinese cabbage, sweet corn, sweet potato, etc.).

Vegetable production production in the target areas visited was in small scale due to labour force constraints for regular watering task.

The result from the context and background information session served as basis for this market analysis and its qualitative results for each target CCA village are integrated into each village's recommended alternative livelihood actions for increased climate resilience while reducing slash-and-burn practices in each village.

IV. Results: Existing trade dynamics in Savannakhet

The review of relevant literatures enabled us to better understand the market network in Savannakhet province which links southern Lao to the Vientiane Capital and Vietnam by Road No.9. Road, and to Thailand by bridge. The infrastructural linkages ease the movement of goods and people while strengthening national and cultural ties between these neighbouring countries. Cross-border trade has seen increases annually with Thailand and Vietnam being the largest trade partners of Savannakhet province. Both countries accounted for almost all export values for the province for cassava and cattle while domestic markets account for most income generated for pig, vegetables and broomgrass (these are the value chains for which the market study will focus on).
Information on value of exports by country (2021-2023) and export value by commodity categories (2021-2024) were sought with Savannakhet's Provincial Industry and Commerce Office. Unfortunately, as of the writing of this report, these remain unavailable. However, the following countries and commodities were identified during the interviews.

	Export partners
1	Thailand
2	Vietnam
3	Australia
4	China
5	Malaysia
6	Indonesia
7	South Korea
8	Japan
9	Singapore
10	Others

Table 10 *Export partners based by Country for Savannakhet (2021 -2023) (Source: PICO of Savannakhet interview during market analysis).*

1	Export products from Lao PDR
	Mineral
	Processing -Handicraft
	Wood and Wood products
	Agricultural products
	NTFP
	Other

Table 11 *Main export categories for Savannakhet (2021 – 2024) (Source: PICO of Savannakhet interview during the market analysis)*

V. Results: Characterizing Casava Value Chain in Savannakhet

Production and trade of Cassava in Savannakhet Province

A) Cassava production

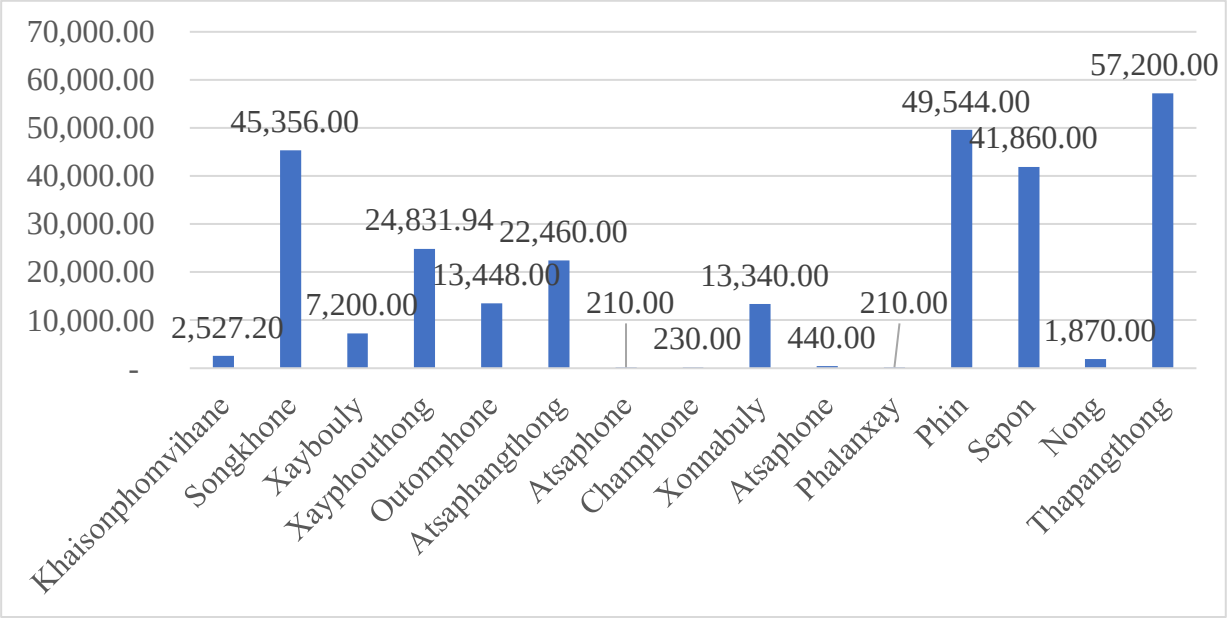

Figure 1. *Cassava production (tons) by districts (Source: Annual report 2023, Department of Agriculture, PAFO of Savannakhet province)*

In the period of 2022-2023, the Department of Agriculture of PAFO of Savannakhet province recorded the production of 280,727.14 tons of cassava. The cassava production is produced in all districts of Savannakhet province with the different production quantity according to the conditions of geographical location. The main production areas are Thaphangthong, Phin, Songkhone and Sepon districts. These four districts accounted for 69% of total production. For this target studied areas such as Sepon, Nong and Xonnabouly district, the cassava production is 57,070 tons (20 percent of total cassava production of Savannakhet province). However, the Sepon district accounts for the fourth largest cassava production in Savannakhet province, generating 96.88 billion kips in income (Sepon DAFO,2023).

B) Trade of Cassava in 2023

No.	Type of Cassava	Export quantities		Import Quantities	
		(Tons/year)	Value ($)	(Tons/year)	Value ($)
1	Dry cassava	144,238.19	24,094,832.17	-	-
2	Fresh root cassava	7,197.00	522,813.00	-	-
3	Cassava flour	29,873.32	13,534,649.50	13,638.70	7,053,245.75
4	Cassava stem	-	-	90.00	4,500
5	Cassava waste	3,561.76	465,514.00	-	-

Table 12. *Trade of Cassava in Savannakhet province, 2023 (Source: Annual report 2023, Department of Agriculture, PAFO of Savannakhet province)*

According to interviewed PAFO and PICO Savannakhet, approximately 100 percent of cassava production is exported, mainly to Thailand, Vietnam and China. For 2023, the Department of Agriculture of PAFO of Savannakhet province recorded 116,312 tons of dry cassava (81%) exported to Thailand ($19,582,500) while 27,926.19 tons of dry cassava (19%) were exported

to Vietnam ($4,511,532.17). In terms of fresh root cassava, 1,050 tons were exported to Thailand and exported to 6,147 were exported to Vietnam. Province-based production of cassava flour were mainly exported to China (29,748 tons or $13,478,998) followed by Vietnam (124.5 tons or $55,651.5). However, Savannakhet province still imported 13,638.7 tons of cassava flour from Thailand.

Analysing the Cassava marketing chain in 3 target districts

Below is the map of cassava marketing chain for the target districts (Sepon, Nong and Xonnabouly districts). This map is based on interviews with producers and different market actors at different level. The cassava quantities transacted were derived from declaration of interviewed actors during the field survey.

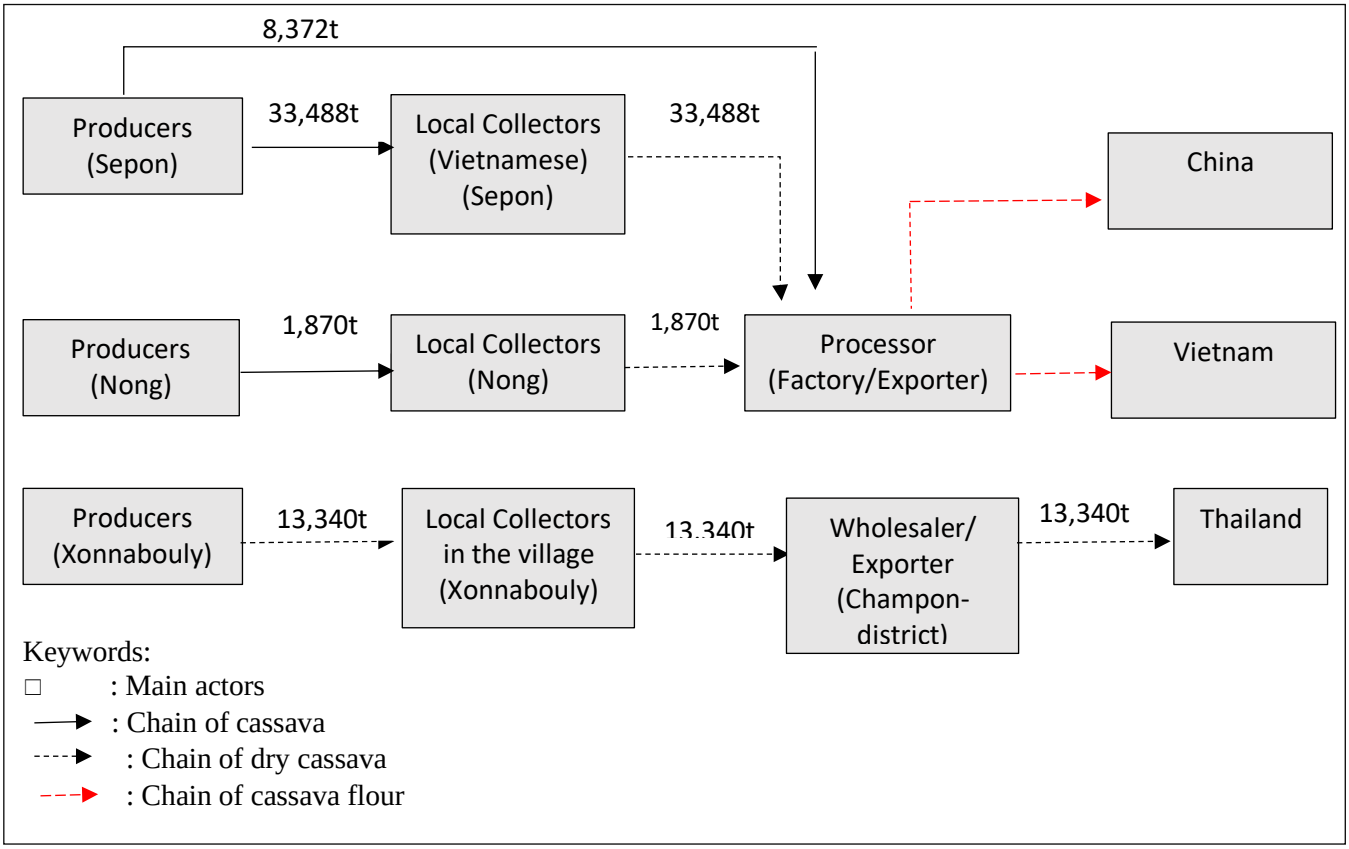

Figure 2. *Map of cassava marketing chain and flow of volume as expressed by interviewed collectors and processors. (Source: Market analysis field survey, June 2024)*

Type of actors		Quantity of purchase (t/year)	Price of purchase (million kip/t) (2023)
Producers	Farmer	2-35	1.7-2.2
Collector	Collector	Small: 30-80 Medium: 100-300	Root: 1.9-2.5 Dry: 3.5-4.0
Collector	Collector/exporter	Small: 200-1,000 Medium:>1,000-30,000	Dry: 4.0-5.0
Processor	Factory/exporter	100,000-150,000	8.1-10.2

Table 13. *Estimated quantities transacted throughout the chain in 5 target CCA villages. (Source: Market Analysis field survey, June 2024)*

Description of Cassava marketing chain actors in target districts

The major actors involved in cassava marketing chain included producer, collector, collector/exporter and processor/exporter. Description of the retailer and consumer not included in the study as they were based in imported countries such as Thailand, Vietnam and China. This section will only describe the role of each domestic actor.

A. Producer

Based on villages' group discussions in the five target CCA villages, the average quantity of production and sale annual for each household averages around 3 to 35 tons (depending on the size of their farms and the condition of the soil), at the yield of 5-10 tons of cassava per hectare. The price set by local collectors at around 1.7 to 2.2 million kip per ton of fresh root cassava and 3.5-4.0 million kip per ton of dry cassava. This price reflects a two-fold increase within the past two years. The producers in two target CCA villages of Sepon district mostly sold their cassava in fresh root form to the factory with smaller amount sold through collectors. On the other hand, the producers from target CCA villages in Nong sold their dry cassava to local collectors.

Production area (district)	**Quantity sold (t/year)**		
	Collector	**Factory**	**Wholesaler/Exportor**
Sepon	33,488	41,860	-
Nong	1,870	1,870	-
Xonnabouly	13,340	-	13,340
Total (by actor)	**48,698**	**43,730**	**13,340**

Table 14. *Estimated quantity of cassava sold by interviewed farmers in the target area (tons/year, 2023) (Source: Market Analysis Field survey, June 2024)*

B. Collector

Collector buys the cassava from producers in mainly two forms: fresh root cassava and dry cassava based on the geographical location and routes of transportation. In Sepon district, there were 7 collectors (Vietnamese collector), all belonging to the factory branches', buying cassava from the producers of two target CCA villages through two modalities: i) Supported farmers with loans (in cash and in inputs) and farm inputs (preparing the land, cassava variety, herbicide) to producers at the beginning of the farming season and then the producers repay their debt after harvesting and selling, ii) they buy the cassava from the farmers without providing any input.

For collectors in Nong district, there are two local collectors who located nearby in the district center, who purchase both fresh root and dry cassava from producers from both Saveu and Tangalai and then sell to the factory in Sepon district.

The collectors in Xonnabouly usually are village-based local collectors (there were around 2-4 collectors per village), who bought only dry cassava from their relatives and producers within their own village and then sold to a large collector/wholesaler/exporter) in Champon district then exported to Thailand. The local collectors were mainly located in Meunghong village (Xonnabouly).

The majority of the collectors had trucks with loading capacity of 4 – 6 tons to collect and transport the produce. The quantity of sales were estimated to be 30 to 80 tons per year per collector for dry cassava and around 2,000 to 7,000 tons per year per collector for fresh root

cassava. Transport cost were estimated to be 300,000 – 600,000 Laks per trip. The collector usually calculates the selling price by incorporating a 10 to 25 percent margin on top of purchasing price and not included the transport cost.

C. Processor/Factory/exporter

Savannakhet province offers prime opportunity due to its strategic location and expansive land area to produce agriculture products for industrial sectors such as rice, sugarcane, eucalyptus and cassava. There are 2 cassava factories, 11 companies and 70 collectors registered in the Industry Division of PICO. The owner of one o the cassava factories who was interviewed about the market situation in Sepon district.. The market analysis did not identify any cassava wholesalers or exporters apart from the factory.

The cassava factory in Sepon district played an important role of cassava value chain in Savannakhet province since 2013. The factory contracted farmers to produce and supply to the factory, in 2020 the total cassava production of Sepon district was 1,200 hectares and in 2023 was 3,364 hectares (increased by 180%). According to DAFO Sepon, recorded quantity of cassava production in 2023 amounted to 53,824 tons. However, the quantity were insufficient to meet the factory's processing demand. In 2023 it was estimated that 70% of the cassava supplied to this factory came from Sepon district and the rest collected from other districts mainly Nong, Phin, Phalanxay and Vilabury districts. The capacity processing of cassava flour was estimated at 70 tons per day, with 4 tons of fresh root cassava needed to produce 1 ton of cassava flour. All cassava flour processed were exported to Vietnam and China.

<u>Linkage between actors of value chain</u>

A. Horizontal Linkages

In general, through village focus group interviews, none of the 5 target CCA villages had farmer's group. Instead, households sold individually to collectors based on developed trust and convenience developed over time. However, producers, through traditional cultural norms, helped each other in the production processes such as sharing labour for land preparation, growing, weeding and harvesting of cassava. Cassava collectors purchasing from the target CCA villages had started to form collective groups although they were not formalized nor registered under PICO. Instead, these collectors shared cassava produce when there were insufficient quantity to fill transport trucks.

B. Vertical Linkages

Vertical linkages could be strengthened through personal relationships, particularly at the village level where trust had been established between producers(farmers) and local collectors. This is especially true at the village level between producers and local collectors, that is based on developed trust. However, some price information on farm inputs and cassava products use flows from input suppliers and collectors to producers.

<u>Characteristics of cassava, price setting mechanisms in chain</u>

In terms of pricing, the factories and wholesalers/Exporters determine the price using the international market situations as determining factor. The market actors offer purchasing prices based on quality and moisture content of the dry cassava with highest preference at 18 percent moisture. The price decreases in accordance to the level of moisture in excess of this preferred standard.

VI. Results: Characterizing Production/Trade Potentials and Challenges of the Casava Value Chain in the 5 CCA Target Villages

Out of 50 villagers interviewed from five target CCA villages in Sepon, Nong and Xonnabouly districts (10 per village), 37 households were involved in cassava production with 29of them from Saveu (Sepon), Tangalai (Nong) and Mueanghong village (Xonnabouly district). It highlighted the significant involvement of the target villages in cassava production. Meanwhile, the other remaining target CCA villages of Kaenghouapha and Thamae (both in Sepon), are still in the initial phase of production process with the focus on land preparations, searching for cassava variety and necessary inputs for next planting season.

			Cassava
District	Village	Gender	Area hectare
Xepone	Kaenghouapa	M	1
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	M	2
Xepone	Kaenghouapa	F	1
Xepone	Kaenghouapa	M	1.5
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	F	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	F	0
Xepone	Thamae	F	2
Xepone	Thamae	F	1
Xepone	Thamae	M	0
Xepone	Thamae	M	0
Xepone	Thamae	F	0
Xepone	Thamae	M	0
Xepone	Thamae	M	0
Xepone	Thamae	M	2
Xepone	Thamae	F	0
Xepone	Thamae	M	3
Nong	Tangalai	M	1
Nong	Tangalai	F	1
Nong	Tangalai	F	1
Nong	Tangalai	F	3
Nong	Tangalai	F	1
Nong	Tangalai	M	1
Nong	Tangalai	F	1
Nong	Tangalai	M	1
Nong	Tangalai	M	1
Nong	Tangalai	M	1
Nong	Saveu	M	1
Nong	Saveu	M	1
Nong	Saveu	F	1
Nong	Saveu	M	1
Nong	Saveu	M	1

Nong	Saveu	F	1
Nong	Saveu	M	1
Nong	Saveu	M	1
Nong	Saveu	F	1
Nong	Saveu	F	1
Xonnabouly	Muanghong	M	1
Xonnabouly	Muanghong	M	0.5
Xonnabouly	Muanghong	F	1
Xonnabouly	Muanghong	M	1
Xonnabouly	Muanghong	F	1
Xonnabouly	Muanghong	M	1
Xonnabouly	Muanghong	F	1
Xonnabouly	Muanghong	F	0
Xonnabouly	Muanghong	F	1
Xonnabouly	Muanghong	M	1

Table 15. *Involvement of interviewed villagers from 5 CCA target villages and indicated area of cassava cultivation.*

Based on villagers' observations, the lower involvement of villagers from Kaenghoupha village in Cassava production is linked to the village's lower access to available land. Upon our analysis, for Thamae, despite lower involvement in cassava production than those seen in Tangalai, Savue and Meunghong, there has been a significant increase in 2024.
In terms of gender involvement, from individual interviews, women involvement in cassava production in the 5 target CCA villages still lacks behind those of their male counterparts. Concretely, 16 out of 37 as compared to 21 out of 37 interviewed stated they were involved in cassava cultivation and trade. This is linked to expressed lack of capital, labour force and knowledge for cassava production (from Session/Task 0 gender focus group interviews). The women were mostly involved in the cultivating and harvesting of cassava.

			Cassava	
District	Village	Households	Number of involved households 2024	Average Household income from cassava (Laks)
Sepon	Kenghouapha	121	81 (from 15 in 2023)	12,000,000
Sepon	Thamae	114	18 (from 3 in 2023)	45,000,000
Nong	Tangalai	71	nearly all	15,000,000
Nong	Savue	119	all households in land preparation for planting	
Xonnabouly	Muenghong	209	190 households, with 20% planting in large area	

Table 16. *Increase in households involvement in cassava production for 5 target CCA villages*

A. Potentials of target areas for cassava value chain

- Producers in the target areas could earn enhanced income from cassava of more than 60 percent of their total average household income (estimated income of 2023,27.5 million kips per household of cassava producer). These producers production and income from cassava are also directly linked to their ability to adopt the new production techniques best fitted to arising conditions;
- Significant increase was observed in the number of producers and cultivation area in all 5 target CCA villages areas in 2024 and expected to continue in the subsequent years. Significant increase in household income is also expected in the target CCA villages.
- High demand of international market has led to increased domestic price and increased income for producers based on the feedback in the 5 CCA villages during village focus group interviews.
- The quality of cassava flour from Savannakhet province has been identified to be of better quality when compare to those from Vietnam and China. In the destination market, the cassava flour has been documented to be processed into more than 40 categories of food;
- For villages such as Kaenghouapha with high prevalence of ethnic poor, particularly women, involvement in cassava production made it an attractive source of livelihood.
- As Cassava is a drought resistant species, cassava production could be least impacted by drought or irregular rain experienced in the 4 upland CCA target villages in Sepon and Nong district.

B. Major challenges of target area in cassava value chain

- In all 5 target CCA villages, producer expressed concern for the investment cost especially during the first year of land preparing and cassava planting. The costs ranges between 10 to 18 million kips per hectare. On the other hand, the cost of transportation is also high and most farmers do not have a truck to transport their products. Therefore, they had to pay for 300,000 to 500,000kip per time with quantity capacity of loading is around 3.5 to 5 tons. The high costs prevented poor households and women, such as those found in Kaenghouapha, from as involved as those in better socio-economic situation (i.e. Meunghong).
- Transportation of cassava during the wet season could face significant difficulties in the four target upland CCA villages in Sepon and Nong districts.
- The lack of household labour and youth labour. Therefore, we can see men, women and children are worked together on whole activities of cassava production.
- In villages such as Kaenghoupha which already has limited land (including forest), or Thamae, Tangalai, and Saveu whose lands are within the Don Phou Vieng NPA, high economic return from cassava production could incentivize villagers to infringe upon and illegally slash and burn NPA areas to extend cassava production.

VII. Results: Recommendations for promoting and supporting of diversified and alternative livelihoods linked to Casava Value Chain for the 5 CCA Target Villages

The following recommendations are proposed to promote each specific CCA target villages to adopt alternative cassava livelihood activities while increasing their climate resilience and reducing slash-and burn practices. As cassava is considered as new cash crop for the farmers in all five target CCA villages and plays an important role in their livelihood activities and generated household incomes. Cassava is a promising crop under climate change as it can keep producing under drought conditions when other major crops cannot and can be grown in soils with low fertility and harvested at any time. However, with the difference contexts for

each target villages, project actions supporting cassava production need to be tailored to the different villages:

- In Kaenghouapha and some extent the other 3 upland CCA villages in Sepon and Nong district: financial and technical support (production and trade) should be provided to support poor farmers, particularly women, to reach the capacity to be more involved in cassava production. However, as land access is limited, Participatory Land Use Planning (PLUP) should be conducted to allocate appropriate cassava production areas.
- For villages within the Don Phou Vieng NPA (Thamae, Tangalai and Saveu), PLUP should be conducted with clear rules and regulations on proper uses of allocated land. Combined with a developed shared governance system that is managed by the villagers to monitor and ensure infringement into the NPA through slash and burn practices for cassava production expansion is prevented.
- Producer groups in all 5 target CCA villages should be developed and their members provided improved cassava production techniques trainings to increase productivity. This could reduce waste and lessen pressure linked to the need for slash and burn additional areas for increased cassava yield and income.
- Agro-ecological practices could be introduced to all 5 target CCA villages to help to increase yield (thus meeting market demands) while intercropping with legumes can increase the productivity of both cassava and legumes (such as soybean) with a good system design. AE practices can also introduce additional resiliency to cassava production for the four upland CCA villages known to face droughts.

VIII. Results: Characterizing Cattle/Buffalo Value Chain in Savannakhet

Production and trade of Cattle in Savannakhet Province

The Department of Livestock of PAFO of Savannakhet province estimated that in 2023, the province has 302,425 buffalo and 425,763 cattle. Comparing to 2019, this is a decrease of 3% or 313,000 buffalos and 12% or 485,000 cattle. The decrease was attributed to the significant expansion of cassava planting areas (2,930 hectares in 2019 to 29,078 hectares in 2023). It was supported by the analysis made for the 5 CCA villages for the Cassava value chain. In 2023, there was 42 cattle farms producing approximately 6,524 cattle.

No.	Types of animals	Unit	2022	2023	Increased (%)
1	Buffalo	Head	302,320	302,425	0.03
2	Cattle	Head	425,414	425,763	0.08

Table 17. *Livestock production in Savannakhet province, 2022-2023. (Source: Annual report 2024, Department of Livestock, PAFO of Savannakhet province)*

Per report of PAFO of Savannakhet, the produced cows and buffaloes are mostly exported to either other provinces, with the majority to Thailand and Vietnam.

Type of animals	**In province**	**Other province**	**Transit from Thailand to Vietnam**
Buffalo	57	1,685	19,882
Cattle	134	1,281	20,566

Table 18. *Export destination of Livestock from Savannakhet province and transit from Thailand to Vietnam (head/year). (Source: Annual report 2024, Department of Livestock, PAFO of Savannakhet province)*

Analysing the cattle marketing chain in the target districts

The Figure 3 present the market chain map of cattle from the producers of 5 target CCA villages in Sepon, Nong and Xonnabuly districts to consumers. Cattle produced is mainly consumed within the district level with some exported to Vietnam. Cattle are sold to local group of meat retailers and/or wholesaler within the district. The small cattle producers are the main actors of the chain followed by local collectors, slaughterhouses and meat retailors who often times are the same persons playing multiple roles. Butchered beef can be bought by consumers directly from market retailers or ordered directly from the local slaughterhouse.

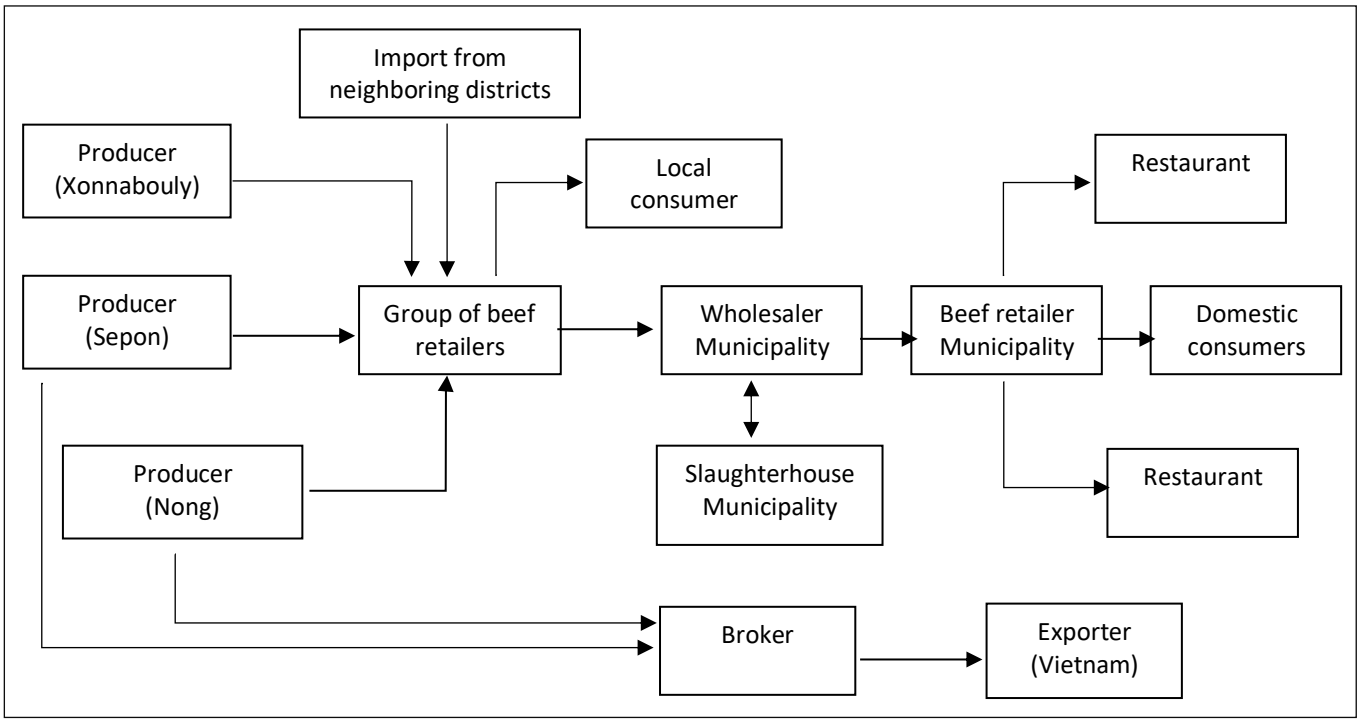

Figure 3*. Map of Buffalo/Cattle marketing chain in studied areas. (Source: Field survey, June 2024)*

Description of actors in the chain

A. Cattle Producer

In the studied area,all livestock producers were smallholders. Of the 626 households surveyed across five CCA villages, 52% are engaged in cattle rearing, with herd sizes ranging from 1 to 30 head per household. Buffalo rearing was reported by 11% of households, with herd sizes between 1 and 25 head. Most households sold 1 to 4 cattle or buffalo per year; however, sales are not regular and occur primarily to meet financial demands, such as cassava production costs, initial land preparation for cassava plantations, medical expenses, or food purchases (e.g., rice). Cattle prices are determined through negotiation between producers and buyers, such as collectors, slaughterhouses, or meat retailers, based on the size and weight of the animal. Live cattle prices range from 4 to 11 million kips per head.

B. Cattle Collector/slaughterhouse/beef retailer

Cattle collectors usually operated at the district level and trade within their district as they were small scale. For in the target areas, there were two registered slaughterhouses in each district

which served the 5 CCA villages. They provided slaughtering services to local collectors or retailers at the price of 100,000 to 200,000kip per head (not included fuels and other materials). However, most of slaughterhouse also operated as local collector and/or beef meat retailers. In Sepon district, there was a beef meat retailer group with 10 members, wherein members rotate and share beef selling in the district market (three times a month per retailer). The beef retailer buy cattle from farmers within the district and neighbouring districts and then sent to them slaughterhouse before retailing the beef at the respective district markets. All collectors had a contract with local dealers who resided in each village. The local dealers coordinated directly with village cow farmers who wanted to sell their cows. Once negotiated price and quantity were agreed upon, the dealer call to the collector to purchase and collect the cows. The dealers were given a commission of around 100,000-150,000 kip per head of cattle. The slaughterhouse slaughters approximately 1 to 4 cattle and 2-4 pigs per day, with Nong district being much higher due to greater demand for meat and much higher in during the cassava harvesting season (January to March). Beef meat demand within Nong district is estimated to be between 360 to 1,260 heads per year.

District	slaughterhouses	Total beef retailers	Animals slaughtered
Sepon	2	10	Buffalo: 3-5 (per month) Cow: 1-4 (per day)
Nong	2	4	Buffalo: 2-4 (per month) Cow: 2-5 (per day)
Xonnabouly	2	2	Buffalo: 1-2 (per month) Cow: 2-3 (per day)
Total	6	16	

Table 19. *Local retailer group in studied area. (Source: Field survey during Market analysis, June 2024)*

With respect to official regulations for trading in livestock, the trade office (DICO) plays an important role in regulating all trade movements such as purchasing of live animals, slaughterhouse registration and monitoring, sale of fresh meat and retail price. All private sector actors involved in livestock trading must be registered and licensed through DICO.

Figure 4. *slaughter house in Sepon district*

Based on interviews with collectors in the target districts, most cattle collectors collected at least 5 to 15 cattle heads from producers' farms to ensure the cattle quantity for slaughter was adequate and on time to meet market demand. At the time of purchasing the collectors coordinated their collection to ensure there were enough live cattle (4-20 heads per time) to fully load the trucks for transport, thus reducing transportation cost. However, transportation cost was also dependent on the distance between producers and slaughter house or retailers.

Linkage between actors of value chain

A. Horizontal Linkages

Livestock trading in the studied area was regulated by the district trade office with cattle producers lacking collective action such as farmer's groups. Although producers sold individually, meat retailers groups were formed, according to the request of the trade office.

B. Vertical Linkages

The vertical linkage was based on personal relationship between producers and local collectors, with producers knowing well and trusting permanent collectors based within their village. The producers relied heavily on the local dealers to guarantee fair and true price of the cattle.

Characteristics of cattle, price setting mechanisms in chain

The cattle beef traded in the target areas were mainly derived from local beef or native breed with the body weight and quality dependent on the age and the season. The live cattle price was negotiated between the producers and local collector/beef meat retailer/slaughterhouse, sometime with price information provided by local dealers to the collectors. However, price was ultimately decided by the collectors by assessing body quality (looking good), cattle age (3 to 4 years) and the percentage of lean meat (greater than 30 percent of live body weight).

Category By size	Farm gate price (million kip/head)	
	Local cattle	Buffalo
Big	8.5-12.5	13.0-16.0
Medium	5.5-8.2	7.0-12
small	3.0-5.0	< 7.0

Table 20. *Farm grade price of live cattle per head*

Administrative fees and taxes incurred by the private actors for cattle purchasing include:

1. Fee of transaction to be paid to head of village: 150,000-200,000 Laks per head
2. Fee to be paid to DICO: 50,000Laks per head
3. Taxes to be paid to District Financial Office of slaughterhouse: 1,000,000Laks per year
4. Fee to be paid to DAFO for Certification of animal health: 30,000 to 60,000 Laks per head

The other costs for local retailer/slaughterhouses are below:

- Commission for local dealer in the village: 50,000-200,000 Laks per head
- Transport cost: 200,000-400,000 Laks per time (transporting 5 to 10 cattle each time)
- Slaughtering service cost: 100,000-200,000 Laks per head
- Firewood: 30,000-50,000 Laks per head
- Market fee: 500,000 Laks per month or 35,000 Laks per day

Relative financial position of actors in the value chain

Based on analysis on gross margins, local meat retailer, slaughterhouses or meat retailer all share similar margins per head. It was estimated that the incurred cost ranged from 380,000 to 650,000 kip per head while net profit was estimated to range between 200,000 to 1,200,000 kip per head.

The price of beef meat retailer by category:

	Types of meat	Slaughterhouse (wholesaler) (Laks/kg)	Urban retailer (Laks/kg)
1	Fresh meat	110,000	130,000
2	Ruminant components, liver…	60,000	70,000
3	Meat from other part of beef	40,000-50,000	50,000-60,000
4	Rib bone	40,000	50,000-60,000
5	head	120,000	130,000-150,000

Table 21. *retailer price of beef meat per kg*

IX. Results: Characterizing Production/Trade Potentials and Challenges of Cattle/Buffalo Value Chain in the 5 CCA Target Villages

Village FGD of the 5 CCA villages demonstrated that all villages were involved in cattle and buffalo raising. 325 out of the 634 total households from the 5 target CCA villages are involved (or 51.2%) with herd size per household ranging from 1 to 40 heads of cattle, 2 to 25 heads of buffalo.

			Cows		buffalo	
District	Village	Household	Households involved	Herd size	Households involved	Herd size
Sepon	Kenghouapha	121	17	2-20	8	2-15head
Sepon	Thamae	114	30	1-30	40	2-25head
Nong	Tangalai	71	55	2-20	0	
Nong	Savue	119	83	1-15		
Xonnabouly	Muenghong	209	140	5-40	20	2-25head

Table 22. *Cattle and Buffalo rearing in 5 target CCA villages*

Kaenghouapha with its limited land and financial resources present the least proportions of livestock producers. Thamae with its lack of animal production area and being located within the Don Phou Vieng NPA, also demonstrate limited cattle and buffalo rearing. In converse, the other three CCA villages with more land and resources demonstrate a higher level of cattle and buffalo production (more than 50% of the households).

This is corroborated in the interviews of 50 villagers from 5 target CCA villages (10 per village).

District	Village	Gender	Cattle	Buffaloe
			Herd size	Herd size
Xepone	Kaenghouapa	M	1	0
Xepone	Kaenghouapa	M	0	0
Xepone	Kaenghouapa	M	0	0
Xepone	Kaenghouapa	M	0	0
Xepone	Kaenghouapa	F	1	0
Xepone	Kaenghouapa	M	0	5
Xepone	Kaenghouapa	M	0	0
Xepone	Kaenghouapa	F	0	0
Xepone	Kaenghouapa	M	0	1
Xepone	Kaenghouapa	F	0	0
Xepone	Thamae	F	6	0
Xepone	Thamae	F	0	0
Xepone	Thamae	M	8	0
Xepone	Thamae	M	0	0
Xepone	Thamae	F	0	0
Xepone	Thamae	M	0	0
Xepone	Thamae	M	0	20
Xepone	Thamae	M	3	0
Xepone	Thamae	F	0	0
Xepone	Thamae	M	0	1
Nong	Tangalai	M	4	0
Nong	Tangalai	F	5	0
Nong	Tangalai	F	1	0
Nong	Tangalai	F	0	0
Nong	Tangalai	F	2	0
Nong	Tangalai	M	0	0
Nong	Tangalai	F	4	0
Nong	Tangalai	M	0	1
Nong	Tangalai	M	3	0
Nong	Tangalai	M	4	0
Nong	Saveu	M	3	0
Nong	Saveu	M	6	0
Nong	Saveu	F	0	0
Nong	Saveu	M	8	0
Nong	Saveu	M	9	0
Nong	Saveu	F	2	0
Nong	Saveu	M	0	0
Nong	Saveu	M	5	0
Nong	Saveu	F	12	0
Nong	Saveu	F	0	0
Xonnabouly	Muanghong	M	19	19

Xonnabouly	Muanghong	M	4	0
Xonnabouly	Muanghong	F	4	0
Xonnabouly	Muanghong	M	0	0
Xonnabouly	Muanghong	F	8	0
Xonnabouly	Muanghong	M	0	0
Xonnabouly	Muanghong	F	9	0
Xonnabouly	Muanghong	F	7	0
Xonnabouly	Muanghong	F	5	0
Xonnabouly	Muanghong	M	5	0

Table 23. *Cattle and buffalo production from interviewed villagers in 5 CCA villages*

In terms of gender involvement in livestock rearing, based on individual interviews of the 5 CCA villages (Table 23) there was an equal involvement of women compare to men (13 out of 27 total producers for women compare to 14 out of 27 total producers for men). However, involvement in livestock rearing was limited by farmers' financial capacity and access to grazing land.

A. Potentials associated with cattle value chain

- Farmers in 4 CCA villages in Sepon and Nong had a long tradition in cattle raising, applying customary rearing methods and uses that require minimal inputs.
- There were collectors who collect the animals directly in production places saving farmers the need and costs to transport animals to sell. However transportation was impacted during the wet season when access becomes more limited.
- Relative near distance between the 4 target CCA villages in Nong and Sepon (all less than 20km) from the district centers ease the logistical requirements for cattle collection, butchering and selling.
- The collectors /or retailers had organized themselves in a group of meat retailer, thus installing a more developed and efficient system for cattle commercialization, providing the stability in the value chain.
- The farmers involved in the 5 target CCA villages generally own their own land thus they were able to adapt to cattle farming using new technology and new variety of cattle and grass.

B. Major challenges of target area in cattle value chain

Several constraints to the value chain and its actors were identified:

- Initial investment for cattle rearing and land access often excluded poor communities particularly those of poor ethnic women found in Kaenghouapha from participating to this lucractive livelihoods.
- In the 4 target upland CCA villages of Sepon and Nong, cattle collection and selling face logistical difficulties during the wet season as despite being near to the district centers, their road access deteriorate significantly due to rain.
- During the dry season, lack of water due to drought experienced in the 4 target CCA villages of Sepon and Nong result in poor cattle health and reduced weight.
- In all 5 target CCA villages there is no cattle fattening practices and combined with limited vaccination (in Tangalai and Meunghong), result in high annual cattle losses.
- Free-razing as a method for cattle rearing throughout all 5 CCA villages which means cattle could destroy forests in Kaenghouapha which had limited land, or infringe upon Don Phou Vieng NPAs (Thamae, Tangalai, and Saveu villages) and even destroy protected areas of the NPA.

- costs associated with purchasing and collecting animals were high due to transportation costs, associated administrative fees and taxes, and higher price of local cattle breed compared with the body weight of cattle.
- Throughout the 5 target CCA villages, farmers are selling their cattle individually, in most cases in smaller quantities and to trusted collectors who they prefer (normally the local collectors) as they lack formalized producer/farmers groups.
- Throughout the 5 target CCA villages, and particularly in Tangalai, Thamae and Saveu, livestock rearing has decreased as more areas are reallocated for cassava production.

X. Results: Recommendations for promoting and supporting of diversified and alternative livelihoods linked to Cattle/Buffalo Value Chain for the 5 CCA Target Villages

The observed results in 5 target CCA villages led to the conclusion that most of the farmers remained concerned about their cattle farming system, particularly linked to the decreasing pasture land or forest areas for cattle rearing. It was compounded by the increasing areas taken over by cassava production seen throughout the CCA villages. Therefore, recommended activities should seek to stabilize the production system to ensure adequate cattle supply to meet market demands. The following recommendations are proposed to promote each specific CCA target villages to adopt improved cattle raising activities while increasing their climate resilience and reducing slash-and burn practices.

- In Kaenghuouapha, where there was threat of infringement and destruction of forest lands due to scare land resource, PLUP should be conducted and land management by local authority should be organized to allocate adequate cattle rearing areas. The allocated areas could be fenced to reduce cattle free ranging.
- In the 4 upland target CCA villages, particularly Kaenghouapha, financial and technical support could be provided to poor villagers, particularly ethnic women, to reach the capacity to participate to livestock rearing.
- In Tangalai, Thamae and Saveu where villages land was within the NPA, PLUP could also be conducted and supported provided to district DAFO, DoNRE, NPA and village authorities to ensure livestock rearing areas are allocated and villagers's cattle do not infringe upon the NPA, particularly during the wet season. Allocated cattle areas could be fenced to reduce cattle free ranging.
- In Kaenghouapha, Thamae and Saveu, support for vaccinations could be provided. Meanwhile, studies could be conducted to determine source of cattle mortality experienced by all CCA villages (even seen in Tangalai and Meunghong).
- As none of the CCA villages expressed existence of functioning cattle farmers/producer groups (Session/Task 0), organization of new farmer groups to technically support farmers practices while improving their commercialization structures. Such cattle producer groups could play key role in negotiating cattle price, facilitating the coordination of cattle supply by their members to the private actors, and eventually developing vaccination services for their members.
- As cattle are most affected by lack of feed during the dry season, particularly those in the 4 target upland CCA villages in Sepon and Nong, Agro-diversification of improved pastures (Guinea grass, Napier fodder cane, Israel fodder cane, and Stylo legume) and implementation of Integrated Silvopasture model (Gliricidia sepium fodder legume tree Leucena leucocephala fodder legume tree, Paper Mulberry-Broussonetia papyrifera) in these villages. The agro-ecological practices could help to diversify fodders for cattle, partly mitigate dry season fodder shortage and including

fodder trees in the pasture, and improve pasture thus limiting expansion/infringement into NPA and forests by maximizing fodder/land production output.

- In all target CCA villages as cattle production and selling are equally conducted by women, gender empowerment and improved production skills training (such as for sweepers) should be provided to villages' women to take on leadership roles in the village productions. It could also support to reduce their socio-economic difficulties that are expressed during gender focus group interviews.
- As all 5 target CCA villages still practiced traditional cattle rearing, technical capacity improvement to cattle farmers could be achieved through trainings in various topics, demonstration and study tours to various livestock projects such NUSAP (completed), Eficas (completed), or currently the ADB's Greater Mekong Subregion Cross-Border Livestock Health and Value Chains Improvement Project as well as the AFD's SWAN project.

XI. Results: Characterizing Pig Value Chain in Savannakhet

Production and trade of pig in Savannakhet Province

The Department of Livestock of PAFO of Savannakhet province estimated the province has 342,855 pigs in 2022 and 345,348 pigs in 2023, showing a year-by-year increase of 0.73 percents. There are 142 pig farms in the province divided into three categories of large scale (450 to 4,320 pigs) composed of 10 farms, medium scale (100 to 400 pigs) and composed of 56 farms, and small scale (15 to 90 pigs) which are composed of 76 farms. Pig raised in Savannakhet are mainly consumed within the province. However, pigs grown by medium and large-scale farms are known to be exported to other provinces except to Phongsaly province. For 2023, this inter-provincial exportation is recorded to be 35,965 piglets, 12,814 heads of adult pigs and 194 heads of native pigs.

Analysing the marketing chain for Pig value chain in Savannakhet

The Figure 5 illustrates the pig marketing chain from producers to consumers of the project target districts (Sepon, Nong and Xonnaboulu district). As mentioned previously, pigs produced are mainly consumed within the province. The pigs from producers are sold to local retailers and then slaughtered at slaughterhouse. The pork meat can be bought by consumers directly from urban retailers.

Based on analyzed data of pig collectors, processors and retailers in three target districts, two channels can be discerned for the market chain. The first channel which is prevalent throughout the three districts involve producers selling their pigs to the local collectors, or slaughterhouses or retailers wherein on average one known retailer is registered with both the District Industry and Commerce Office and DAFO. In Xonnabouly, there are 3 retailers that import pork meat from Savannakhet city due to greater local demand than the local supply. The second channel is specifically for the well-recognized Sepon native pig, known for its small body size and small weight. The collectors buy these pigs from farmers within the districts and neighbouring districts notably Nong, Phin, Phalanxay and Vilabury districts. Again, similar to the first channel, the end consumers are the districts' local consumers

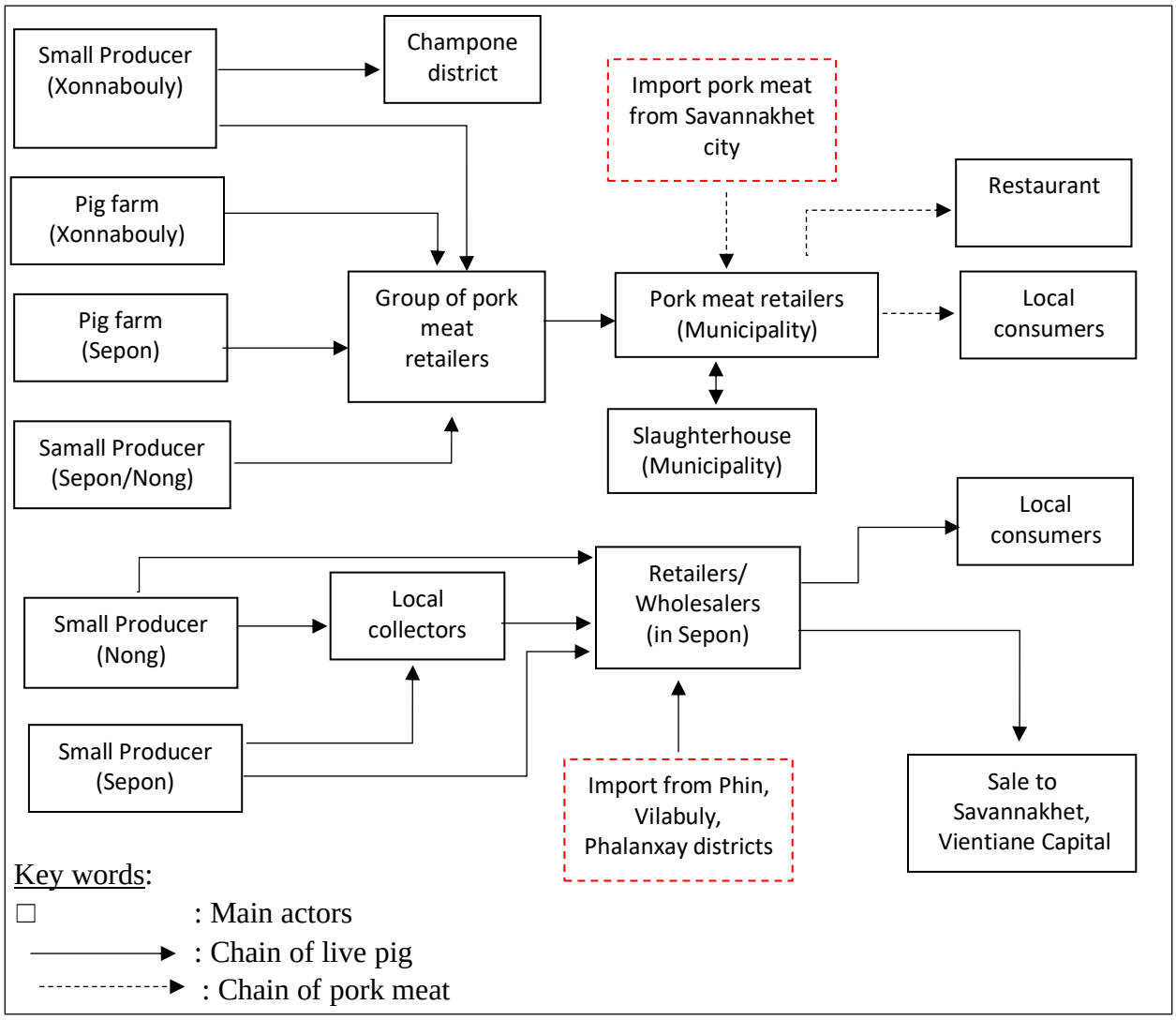

Figure 5. *map of pig marketing chain (Source: Field survey, June 2024)*

Description of actors in the chain

Type of actors		Quantity of purchase (head/year)	Price of purchase (kip/head), 2024
Producers	Small producer Pig farm	1 - 8 20 - 60	300,000-1,000,000
Collector	Slaughterhouse	360 - 420	500,000-1,500,000
Retailer	wholesaler	Pork meat: 360-420 Native pig: 1,800-2,520	Pork meat: 500,000-1,500,000 Native pig: 350,000-1,200,000

Table 24. *Estimated quantities transacted throughout the pig marketing chain based on interviews with pig market actors*

A. Producer

Pig producers can be categorised into two types namely: i) smallholder and ii) pig farm. The smallholder raises between 1 to 8 pigs per household per year. The pig farms, in total, can produce approximately 1,000 pigs a year, averaging 20 to 60 pigs per farm. Most pig

producers involved in other activities in addition to pig production to diversify their income stream. The live-weight price of native pig range from 350,000 to 1,200,000 Laks per head and pork meat price range from 500,000 to 1,500,000 Laks per head.

B. Collector/slaughterhouse/pork meat retailers (channel 1)

There were two categories of pigs buyers exist: One category(channel 1)consist of local retailers buys directly from producers then slaughter the pigs to sell in their own district markets while another category(channel 2) consists of collectors who buy the pigs for resale either immediately or after fattening operations in their farms. In the target districts, local collector were observed to operate similarly to their retailer counterparts. The collectors or retailers were responsible for obtaining proper paperwork such as operating license and health certificates. In general, both types of buyers purchase pigs directly from pig farmers at farmers' homes in small quantities each time (i.e. one to two) and then send to slaughterhouse to be butchered. Slaughtering incur a cost of 50,000 to 100,000 Laks per head. The slaughterhouse slaughters approximately 1 to 3 pigs per day, with Nong district slaughterhouses recording significantly higher rate of daily slaughtering due to greater local consumer demand for pork meat. On average, it was observed one pig slaughterhouse and one pork meat retailer exist per target district. After expenses, retailer testified to generate a net profit between 150,000 to 300,000 Laks per head coming from difference between costs of 70,000 laks per kg and selling at 80,000 Laks per kg (prevailing price seen at Savannakhet district market). Particularly, in Xonnabouly district, three pork meat retailers were registered and operate in the district market.

C. Collector (channel 2)
The channel involved twenty actors who have been operating for more than 20 years,Making them well established and recognized particularly in Sepon district.

They usually operate at the district level and trade within their district as they are small scale and generally have not obtained legal permits or trading permission. However, working as group of retailers, they have their own funding capacity to buy larger numbers of pigs for reselling in the local market. They usually have a network of contacts that informs them about availability of pigs. These collectors usually use their own vehicles for transportation (motorbikes or trucks) or animals are usually transported directly to their homes by producers.

From our analysis, each collector/broker can sell around 2 to 20 pigs per day (or 360 to 720 pigs each year). The purchasing price is 300,000 to 800,000 kip a head according to the live-weight of the animals and the animals are sold once to twice per month at 20 to 40 pigs each time to either Savannakhet province's or Vientiane consumers. These collectors/brokers' gross margin is estimated to be between 10,000 to 30,000 Laks per head, ten-fold lesser than their channel 1 retailers counterparts.

<u>Linkage between actors of value chain</u>
A. Horizontal Linkages
Although the trade of livestock in Savannakhet province is regulated by the trade office, pig producers in studied area do not have the collective action as farmer's group formation. Farmers sell their production individually. Only the meat retailers form official group due to the request of the trade office.

B. Vertical Linkages

Vertical linkages are based on personal relationships, especially at the village level between pig producers and local traders who facilitate the trade (networking, market linkages, informing the availability of animals to retailers/collectors). Price information is given from the traders to the producers, although how these prices are derived are often non-transparent to the producers. Overall, the vertical linkages in the marketing chain are incomplete.

Characteristics of price setting mechanisms in pig marketing chain

Throughout the districts, the local collectors, retailers and brokers play critical role in determining prices. They offer the price to pig producer based on weight of animal while at the consumer end, local retailers propose selling price of pork meat to the consumers. However, officially, the final price should be controlled by the trade office.

Relative financial position of actors in the value chain

According to the share of actors in the pig value chain, the profit margin was between 150,000 to 300,000 Laks per head of pork meat and 10,000 to 30,000 Laks per had for the native pigs, which is significantly smaller. However, the small profit margin, particularly for native pigs, was offset by the large volume of pigs and pork meat sold daily and annually.

XII. Results: Characterizing Production/Trade Potentials and Challenges of Pig Value Chain in the 5 CCA Target Villages

Village focus group discussions held during the market analysis for each CCA target villages demonstrated that pigs rearing for sale exist in different level with highest level in Savue village. Kaenghouapha, an ethnic village in the upland with high level of poverty (Session/Task 0 analysis) presented the lowest number of households involved in pig rearing.

			pig	
District	Village	Households	households involved	Herd size per household
Sepon	Kenghouapha	121	7	1breeding mother
	Thamae	114	52	1-2breeding mother
Nong	Tangalai	71	35	1-2breeding mother
	Savue	119	95	1-2breeding mother
Xonnabouly	Muenghong	209	40	1-2breeding mother

Table 25. *Household involvement in pig production in 5 target CCA villages based on village focus group discussion.*

Interviews conducted with 10 representing individuals per CCA target villages also demonstrate the results of Session/Task 0 as well as the village focus group discussion. Meunghong (Xonnabouly) experiencing more lucrative livelihoods (lowland rice, cattle and cassava) exhibited lowest proportion of pigs producers in comparison to total households.

District	Village	Gender	Pig household production #head
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	M	4
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	F	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	F	0
Xepone	Kaenghouapa	M	0
Xepone	Kaenghouapa	F	1
Xepone	Thamae	F	0
Xepone	Thamae	F	0
Xepone	Thamae	M	0
Xepone	Thamae	M	0
Xepone	Thamae	F	0
Xepone	Thamae	M	1
Xepone	Thamae	M	2
Xepone	Thamae	M	0
Xepone	Thamae	F	2
Xepone	Thamae	M	1
Nong	Tangalai	M	2
Nong	Tangalai	F	1
Nong	Tangalai	F	1
Nong	Tangalai	F	0
Nong	Tangalai	F	2
Nong	Tangalai	M	0
Nong	Tangalai	F	
Nong	Tangalai	M	1
Nong	Tangalai	M	1
Nong	Tangalai	M	1
Nong	Saveu	M	2
Nong	Saveu	M	3
Nong	Saveu	F	2
Nong	Saveu	M	3
Nong	Saveu	M	5
Nong	Saveu	F	0
Nong	Saveu	M	1
Nong	Saveu	M	1
Nong	Saveu	F	2
Nong	Saveu	F	0
Xonnabouly	Muanghong	M	2
Xonnabouly	Muanghong	M	0
Xonnabouly	Muanghong	F	0

Xonnabouly	Muanghong	M	0
Xonnabouly	Muanghong	F	0
Xonnabouly	Muanghong	M	0
Xonnabouly	Muanghong	F	0
Xonnabouly	Muanghong	F	1
Xonnabouly	Muanghong	F	0
Xonnabouly	Muanghong	M	0

Table 26. *Expressed pig production from individual interviews in 5 target CCA villages.*

In addition, based on Session/Task 0 focus group interviews, high pig mortality was reported in Thamae (Sepon), Saveu (Nong) and Meunghong (Xonnabouly) villages. Interviewed villagers could not identify the specific cause besides indicating death through disease. Despite yearly high pig mortality, farmers in these villages continue to grow pig, albeit at decreasing numbers.

In terms of women engagement in pig producing in 5 target CCA villages, they are generally less involved than men (8 out of 23 total individual respondents as compare to 15 out of 23 for men). However, gender focus group discussions conducted in these 5 CCA villages shed some correlation to the degree of women involvement to their expressed poverty level and access to financial means to rear pigs.

A. Potentials of target area for pig value chain

- Farmer in 4 CCA villages in Sepon and Nong have a long tradition in pig raising, applying customary rearing methods and uses that require minimal inputs.
- There are collectors who collect the animals directly in production places saving farmers the need and costs to transport animals to sell. However transportation is impacted during the wet season when access becomes more limited.
- Relative near distance between the 4 target CCA villages in Nong and Sepon (all less than 20km) from the district center ease the logistical requirements for pig collection, butchering and selling.
- The collectors /or retailers have organized themselves in a group of retailers, thus installing a more developed and efficient system for pig and pork meat commercialization, providing the stability in the value chain.
- New market of native pigs has exhibited increased on demand especially in urban areas of Savannakhet and Vientiane capital.

B. Major challenges of target area in pig value chain

- In Thamae and Savue, high pig mortality due to poor traditional rearing practices reduces farmers benefit.
- In all 4 CCA target villages in Sepon and Nong, the native pig collected from rural villages often loss their weight if they could not be sold within a few days. It results in financial loss for the collectors and retailers.
- In the 4 target upland CCA villages of Sepon and Nong, Pig collection and selling face logistical difficulties during the wet season as despite being near to the district centers, their road access deteriorate significantly due to rain.
- During the dry season, lack of water due to drought experienced in the 4 target CCA villages of Sepon and Nong
- Pigs in Lao, particularly areas of Savannakhet have been known to endure African Swine fever (ASF), thus incur pig loss, reduced income and consumer confidence during episodes of outbreaks. This can be discerned in the significant annual pig loss

seen in Thamae and Saveu and noticeable level in Kenghouapha and Tangalai villages.

- Pigs rearing by farmers continue to be mostly through customary methods (free roaming practices), with low level of applied animal husbandry. This is inefficient and sometimes susceptible to disease (and weight loss) and higher mortalities as seen in Thamae and Saveu.

XIII. Results: Recommendations for promoting and supporting of diversified and alternative livelihoods linked to Pig Value Chain for the 5 CCA Target Villages

The following recommendations were proposed to promote each specific CCA target villages to adopt alternative pig livelihood activities while increasing their climate resilience and reducing slash-and burn practices. It is evident that the villagers in the 4 target CCA villages in Sepon and Nong, despite difficulties and yearly losses, still consider pig rearing as an important livelihood. However, with increasing financial attractiveness coming from Cassava and pressure to slash and burn more village areas (including forests) for cassava production, villagers are seen to reduce their pig rearing each year. The priority is to re-incentivize villagers toward pig production to diversify their livelihoods, serve as financial buffer during climate-relate shocks, while providing an alternative livelihood that increase villagers climate resilience. Thus, recommended activities are linked to the stabilization of the production system to ensure adequate supply of pigs that have high weight ratio and in quantity that could meet market demands, specifically:

- In 4 target CCA villages in Sepon and Nong: introduce improved animal breeding and rearing practices to ensure improved pig and pork meat quality.
- In 4 target CCA villages in Sepon and Nong: water scarcity during the dry season is known to impact their daily life (findings from Session/Task 0) which in turn negatively impact pig rearing. Supporting improved water infrastructures and management (such as water user group) could alleviate this problem during the dry season.
- For Thamae (Sepon) and Saveu (Nong) villages, studies could be conducted to identify the source of high pig mortality and provide support as needed, which may include vaccinations against ASF which has been documented to affect pigs production in Savannaket.
- In Kaenghouapha, despite interest for pig rearing, lack of financial resources, particularly by ethnic and poor women of this village, has hampered wider scale production. Financial and technical support could be provided to theses villagers, particularly its women to rear pigs for selling. This could also incentivize villagers away from slash and burn practices for cassava production.
- It is evident that pig rearing is not a priority for Meunghong village in Xonnabouly due to their other diverse livelihoods (cassava, cattle and lowland rice). Therefore actions supporting pig production in this village is not recommended.
- As none of the 4 target CCA villages in Sepon and Nong have organized producer groups, organization of new farmer groups to technically support farmers practices while improving their commercialization structures could stabilize supply. Such pig producer groups could play critical role in price negotiation, logistical coordination with collectors/processors/retailers, and even improved pig health services to their members.

- Technical support to pig farmers of the four CCA target villages in Sepon and Nong through trainings in various topics, demonstration and study tours. This is particularly important for the women of these villages (especially so for the women of Kenghouapha) to take on greater (and equal) role in pig production and trade. Increased financial security through pig production could also incentivize villagers back toward pig production and away from slash and burn practices for cassava or upland rice production.

XIV. Results: Characterizing Vegetable Value Chain in Savannakhet

Production and trade of vegetable in Savannakhet Province

The Department of Agriculture of PAFO of Savannakhet province estimated that the most vegetable communities are included cucumber 12,384 tons, beans 3,984 tons, chili 8,321 tons, egg plants 10,579 tons, tomato 3,276 tons, onion 2,742 tons, garlic 870 tons and vegetable 18,674 tons. In generally, PAFO's report identified that vegetable produced in Savannakhet is for domestic consumption, with the largest vegetable producers located in Khaisonphomviharn, Songkhone and Xonnabouly districts. In Savannkhet province, there is 390 greenhouses of vegetable production for commercialization with 89,840 square meters within 11 districts. Due to Savannakhet province's large population, vegetable demands for popular vegetables such as cabbages, Chinese cabbage, broccoli, cauliflower, lettuce and others are met through importation from other provinces (particularly Champasack province) and neighbouring countries.

Districts	Cucumber	Beans	Chili	Egg plants	Tomato	Onion	Garlic	Other Vegetables
Khaisonphomvihane	1,050	350	751	871	580	353	185	3,148
Songkhone	1,010	406	795	1,106	336	418	167	2,412
Xaybouly	2,672	445	787	990	834	425	255	2,610
Xayphouthong	1,030	336	937	1,050	356	262	-	1,858
Outomphone	1,020	360	515	637	248	135	-	664
Atsaphangthong	1,273	298	510	654	-	85	-	1,014
Champhone	1,000	300	961	761	245	126	-	1,177
Xonnabouly	**979**	**385**	**627**	**666**	**137**	**142**	**-**	**1,204**
Atsaphone	910	305	517	662	136	200	-	689
Phalanxay	309	-	520	780	136	80	22	676
Phin	150	280	206	645	-	200	-	649
Sepon	**680**	**270**	**239**	**365**	**-**	**79**	**114**	**640**
Nong	**100**	**28**	**26**	**65**	**-**	**79**	**-**	**634**
Thapangthong	100	98	464	650	134	79	-	644
Vilaboury	101	123	466	677	134	79	127	655
Total (Tons)	***12,384***	***3,984***	***8,321***	***10,579***	***3,276***	***2,742***	***870***	***18,674***

Table 27. *Vegetable production in Savannakhet province, 2023 (in tons). (Source: Annual report, Department of Agriculture, PAFO of Savannakhet province, 2023)*

Analysing the marketing chain

From interviewed 9 vegetable retailers from 3 districts markets (all females) who well represent the existing retailers in the 3 target districts, the following marketing chain was developed. It should be noted organized vegetable growing and selling do not exist in the 5 target CCA villages which is evidenced by only 2 interviewed villagers (Kaenghouapha village in Sepon and Tangalai village in Nong District) identifying small scale vegetable selling as an alternative livelihood.

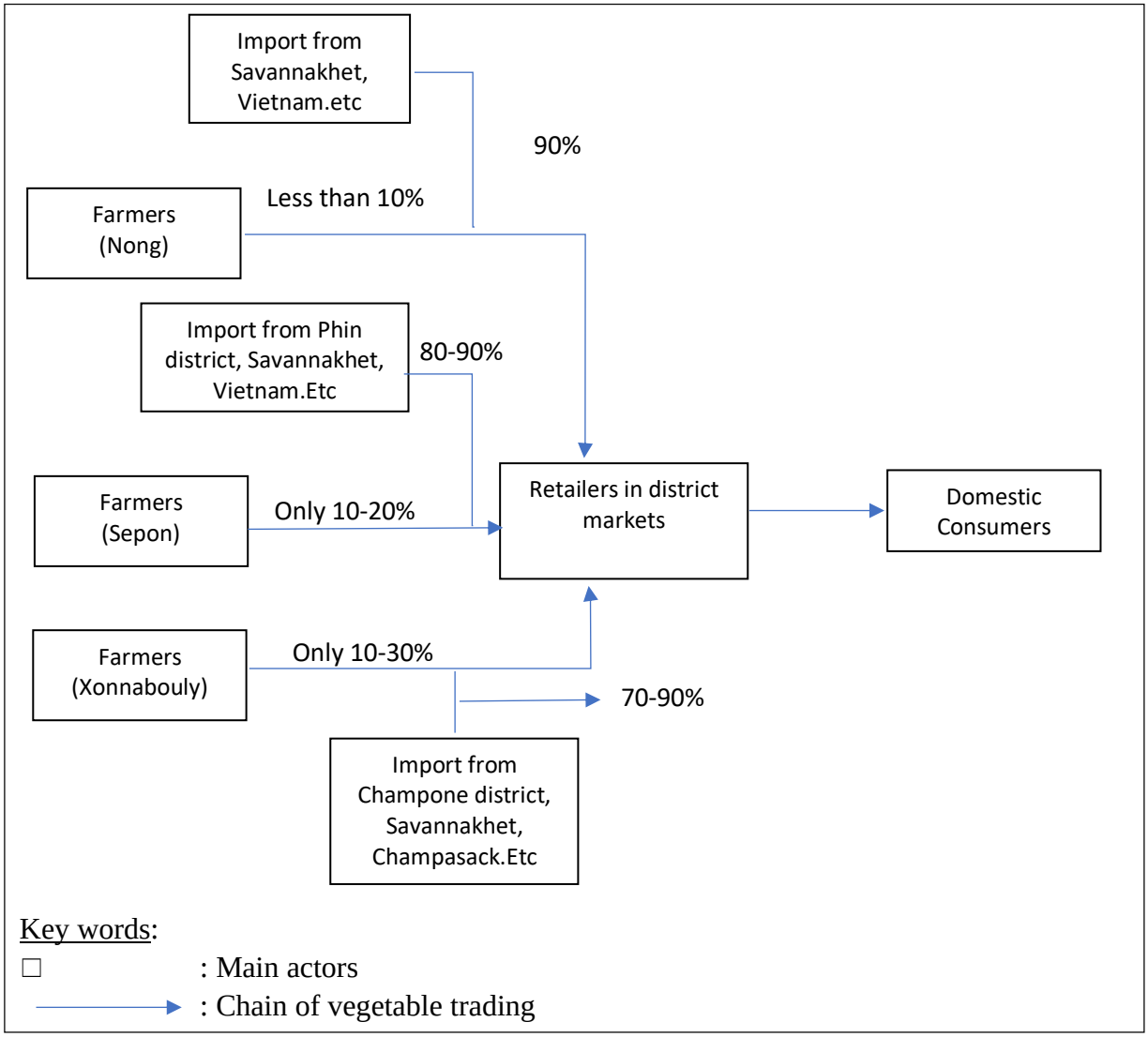

Figure 6. *map of vegetable marketing chain in studied areas*

Retailers interviews also identified that around 70 to 90 percents of vegetables are usually imported from neighbouring districts (i.e. Sepon and Nong districts imported from Phin, and Phalanxy districts; Xonnabouly imported from Champone, etc.) while some are imported from Vietnam.

Description of actors in the chain

A. Producer

Among the five target CCAs villages, vegetable growers were not organized commercialization as many villagers grow vegetables in home gardens for household consumption, particularly

during the dry season. However, some farmers (women in Kenghouapha of Sepon district and Tangalai of Nong district) do collect vegetables and non-timber forest products from village lands or forests to sell at small scale in local market or district markets.

B. Retailers

We were able to identify 37 vegetable retailers with 20 located in Sepon district, 10 in Nong, and 7 in Xonnabouly district. As most retailers operate similarly, 9 representing retailers were interviewed. They were all women, representing the high number of women retailers involved in vegetables trading. In general, they purchase/collect vegetables from various sources such as domestic producers (none from the 5 target CCA villages), neighbouring districts, Savannakhet markets and neighbouring Vietnam. The geographical origin of vegetables are different according to the vegetable species. In Sepon and Nong district, the biggest suppliers (80 to 90%) are from Phin district, Savannakhet city and Vietnam, while the biggest suppliers for Xonnabouly district retailers come from Champone district and Savannaket city. In Sepon and Xonnabouly districts, retailers sell vegetables in Sepon's district market while in Nong district, vegetables are sold in retailer's house (there is no central market in the district).

Although the quantities sold per day are small, the types of vegetables sold are diverse (15 to 25 types of vegetable products per retailer) with the quantity sold for each product dependent on each product's unit weight.

Characteristics of vegetable, price setting mechanisms in chain

According to interviewed retailers, price is set by retailers operating in Savannakhet city market, which is then adopted by other retailers in the area. The price for each vegetable is calculated based on expected gross margin or net profit that could be achieved for each commodity. This margin can vary between different vegetable products but in general, they average around 5,000 Laks per kg. For example, a retailer will purchase 50,000kips for 6 small bags of eggplant and then sell back at 10,000kips per bag (20% profit margin), while cabbage could be bought at 130,000kips per 10kg and retailing at 25,000kips per kg (or 250,000 total, at profit of 92%).

XV. Results: Characterizing Production/Trade Potentials and Challenges of Vegetable Value Chain in the 5 CCA Target Villages

Village focus group discussion held at each CCA target village, it is clear that currently, there is no organized commercialization of vegetables. However, there are documented growing of vegetables in home gardens for home consumption.

		Existing vegetable production and use
District	Village	
Sepon	Kenghouapha	Overall do not grow vegetables due to fencing problems to fence off livestock; limited harvesting of wild vegetables to sell at Sepon district market
Sepon	Thamae	Vegetable garden on river banks, specifically for home consumption
Nong	Tangalai	Women involved in limited collecting of wild vegetables for sell, most home gardens are for home consumption
Nong	Savue	Some home gardens in the village for home consumption

Xonnabouly	Muenghong	Some home gardens in the village for home consumption

Table 28. *Vegetable production in 5 CCA villages identified during Market Analysis' Village FGD*

In the individual interviews, among the 50 interviewees from 5 target CCA villages, two cases were reported in Kaenghouapha (man) and Tangalai (woman) where wild vegetables were harvested for selling at the local markets.

A. Potentials of target area in vegetable value chain

Throughout the interviews conducted in the 5 target CCA villages, we could not find farmers who produced vegetable for sell. They produced for household consumption and in limited areas as very home gardens. However, some potentials are identified: t

- Home gardens for vegetable production were available particularly in the 4 target CCA villages in Sepon and Nong districts all located within 20km of their district centres.
- Moreover, as mentioned by vegetable retailers across three districts markets, there is market demand which necessitated importation of vegetables from outside districts and provinces to local consumers.
- Vegetable growing is widely practisedin all target CCA villages'done by women, and women make up the majority of vegetable retailers. Vegetable production and trade can be an alternative additional livelihood for women, particularly those in ethnic mountainous communities of 4 target CCA villages in Sepon and Nong districts.

B. Major challenges of target area in vegetable value chain

- For 4 target CCA villages in Sepone and Nong districts,had limited experience due to lack of water as a result from drought and irregular rainfall, particularly during the dry season. It is exacerbated by their upland and mountainous locations with inadequate water supply infrastructure. Farmers found it difficult to continue agricultural activities or simple daily life activities.
- In all 5 target CCA villages, farmers lacked technical and organizational experience on vegetable production at scale for organized commercialization purposes.
- At Xebanghieng river bank and homegarden space was available and have potential for commercialized production. But in Kenghouapha, livestock infringement from free ranging practices (cattle, pig, goat, poultry) reduces vegetable growing areas.
- Vegetable production for sale is not possible in 4 target CCA villages in Sepone and Nong during the wet season due to poor road access and higher transport cost.
- Due to small scale vegetable productions in the 5 target CCA villages, traders/retailers were unable to source the vegetable in quantity that would satisfy their consumer demand.

XVI. Results: Recommendations for promoting and supporting of diversified and alternative livelihoods linked to Vegetable Value Chain for the 5 CCA Target Villages

The following recommendations are proposed to promote each specific CCA target villages to adopt alternative vegetable livelihood activities while increasing their climate resilience and reducing slash-and burn practices:

- Support for vegetable production and trade need to prioritise on the 4 CCA villages of Sepon and Nong, but focusing on the dry season production. Meuanghong's (Xonnabouly) available diverse livelihoods (cassava, cattle, lowland rice) and far

distance from district center reduce its villagers' interest to participate in vegetable growing for commercialization purposes.

- In 4 target upland CCA villages in Sepon and Nong, PLUP should be conducted (if not done already) to allocate areas specifically for vegetable commercialized production. This would reduce effect of free ranging of livestocks in Kaenghouapha, while allocating communal vegetable gardens along the villages' riverbeds.
- As 4 target upland CCA villages vegetable production season is relegated to the dry season (poor road access during the wet season), installed improved water supply systems with appropriate water user groups could improve access to water sources to ensure adequate water for vegetable growing during the dry season.
- In the 4 target upland CCA villages of Sepon and Nong, establishing a water user group to appropriately use the improved
- Farmers' producer groups (at village level) in these 4 target villages could be established and members trained on assessing market demands, support each other on vegetable production, support on price negotiations, and coordinate with retailers on product pickup.
- For the 4 target CCA villages in Sepon and Nong, support for vegetable-based retailer groups similar to those already existing for cattles and cassava to improve coordination on purchasing and collection of vegetables once more organized production system is in place.
- As vegetables production and selling are predominantly conducted by women, many coming from ethnic upland villages (in Sepon and Nong), gender empowerment trainings should be provided to villages women to take on leadership roles in the village productions. Similarly, entrepreneurial trainings should be provided to involved women retailers for them to transition into more organized retailers with capacity to upscale beyond small retailers at local district markets.
- Increased income from vegetable production could alleviate financial concerns for upland CCA target villages, especially during the dry season, marginally reducing their need for slash-and-burn practices for cassava production.

XVII. Results: Characterizing Broom grass Value Chain in Savannakhet

Production and trade of broom grass in target area

In the 4 target CCA villages of Sepon and Nong districts currently engaging in boom grass trading. The actors in the market chain included village-based local collectors and wholesalers/Exporters that are based in main district areas. Most of the broom grass that are bought are exported to Vietnam with a small portion allocated for local handicraft production (sweepers) to be sold at local markets.

In 2023, DAFO of Sepon district recorded the total broom grass production area of 275 hectares generating 507.5 tons. These areas are mostly within or surrounding villages' forests and collection are done by farmers. For a long time, broom grass has played an important role for rural communities in both Sepon and Nong districts. However, recently, due to the villagers' increase in cassava production which has resulted in increased cultivation area, this has resulted in the significant reduction in broom grass areas. Therefore, some of farmers, particularly those in Sepon district, have adapted to intercrop broom grass with cassava in these cultivation areas. However, this intercropping practice has not been observed for farmers in Nong district.

Analysing the marketing chain in studied area

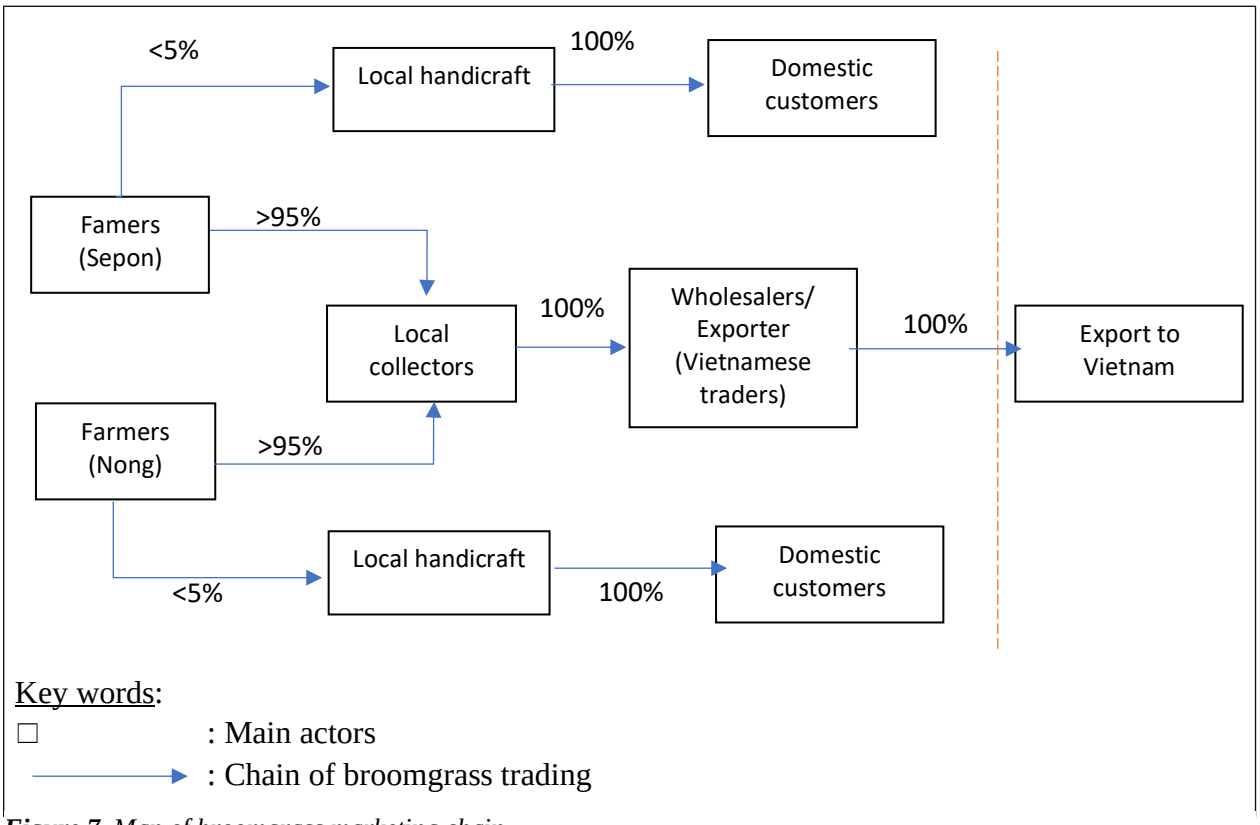

Figure 7. *Map of broomgrass marketing chain*

Description of actors in the chain

A. Producer

Based on CCA village individual interviews, broom grass production and trade exist in 3 of the 5 target CCA villages (Khaenghoupha, Thamae, and Saveu). In these villages, it is estimated that around 80 to 100 percent of total households engage in broom grass collection as supplement source of income. This income on average is around 700,000 Laks per household per year (ranging between 200,000 to 2,500,000 Laks). The price of broom grass as experienced a steady increase in price over the years with current price for undried broom grass at 3 to 4,000 Laks per kg while for dried broom grass is at 10,000 to 11,000 Laks per kg (at conversion of 3-4 kg fresh to 1 kg dry). Harvesting period is between January and February of each year, during the dry season and when rice harvesting has been completed. Most farmers interviewed preferred to sell to local collectors in their own village.

B. Collector

In the 4 CCA target villages of Sepon and Nong district, on average each village has 3 to 4 local collectors that purchase from village harvestors both the fresh and dry broom grass. Despite broom grass production in Tangalai has significantly reduced in favor of Cassava, local collectors still exist for poor households lacking land and financial resources for cassava production. These local collectors, in turn sell dry broom grass to wholesaler or exporters located in urban areas (Sepon and Nong) at 11,000 to 12,000kips per kg, generating a margin of 1,000 laks per kg. These collectors purchase and sell 2 to 3 times per year with the quantity for each time at 400 to 1,200 kg. In total each collector can buy and sell approximately 800 to 3,600 kg per year.

C. Wholesalers/Exporters

In the 5 target CCA villages, there are 12 exporters (Vietnamese traders in Sepon district) involved in buying and exporting broom grass from Sepon and Nong districts, particularly from Kaenghouapha (Sepon), Thamae (Sepon). An exporter (not interviewed) is also based in Nong district buying broom grass from Saveu village (Nong). Based on the information provided by a representative exporter (Vietnamese) based in Sepon district, it estimated that each exporter purchase and export between 50 to 100 tons of broom grass per year. Each loaded trucks for cross border export can handle 4 to 5 tons per time at the transportation cost of between 2,700,000 to 2,800,000 kips (included fuel, border fee and food). For these exporters, purchasing price for fresh broom grass is 5,000 to 6,000 Laks per kg and 11,000 to 12,000 Laks per kg for the dried variety. Exported broom grass are sold in Vietnam, mostly to processing/manufacturing centers for around 13,000 to 15,000 Laks per kg.

Characteristics of broom grass, price setting mechanisms in chain

Broom grass is a non-timber forest product (NTFP) that in Lao are harvested by farmers from forests or previously slash-and-burn areas. Broom grass can grow quite rapidly, allowing for harvest to be done after 1 to 2 years after slash-and-burn or land clearance was conducted. As broom grass does not require inputs and can be a readily available source of income, they are harvested by villagers and sold through most identified convenient and trusted channels such as local collectors who are family members or neighbors. These village-based collectors are well known and normally there is no negative competitions for the supply. In addition, local collectors and villagers agree on similar price structures that takes into account wholesaler / exporters negotiated purchasing price. As broom grass is mostly exported to Vietnam, the pricing is based on the international market demand and with the wholesaler and exporters ultimately deciding on the price at different market link. In cases where villagers can collectively mobilize and produce large quantity, they can have some leverage with the wholesaler and exporters for price setting.

XVIII. Results: Characterizing Production/Trade Potentials and Challenges of Broomgrass Value Chain in the 5 CCA Target Villages

Individuals interviews demonstrated broom grass production for trade for both men and women of 4 target CCA villages of Sepon and Nong, while none of the interviewees in Meunghong (Xonnabouly district) indicate broom grass production. There seems to be a near involvement by men and women (14 versus 11 respectively) in the production and trade. These results are also mirrored by the qualitative results from Session/Task 0 village focus group discussions wherein women are seen to play equal roles as men in broom grass production and trade.

District	Village	Broom grass production	
		Gender	Income
Sepone	Kaenghouapa	M	300,000.00
Sepone	Kaenghouapa	M	900,000.00
Sepone	Kaenghouapa	M	500,000.00
Sepone	Kaenghouapa	M	1,000,000.00
Sepone	Kaenghouapa	F	500,000.00
Sepone	Kaenghouapa	M	
Sepone	Kaenghouapa	M	

Sepone	Kaenghouapa	F	
Sepone	Kaenghouapa	M	
Sepone	Kaenghouapa	F	800,000.00
Sepone	Thamae	F	1,000,000.00
Sepone	Thamae	F	1,000,000.00
Sepone	Thamae	M	
Sepone	Thamae	M	
Sepone	Thamae	F	1,000,000.00
Sepone	Thamae	M	1,500,000.00
Sepone	Thamae	M	800,000.00
Sepone	Thamae	M	500,000.00
Sepone	Thamae	F	500,000.00
Sepone	Thamae	M	2,500,000.00
Nong	Tangalai	M	
Nong	Tangalai	F	
Nong	Tangalai	F	200,000.00
Nong	Tangalai	F	
Nong	Tangalai	F	
Nong	Tangalai	M	
Nong	Tangalai	F	
Nong	Tangalai	M	
Nong	Tangalai	M	
Nong	Tangalai	M	
Nong	Saveu	M	600,000.00
Nong	Saveu	M	500,000.00
Nong	Saveu	F	700,000.00
Nong	Saveu	M	400,000.00
Nong	Saveu	M	300,000.00
Nong	Saveu	F	500,000.00
Nong	Saveu	M	300,000.00
Nong	Saveu	M	700,000.00
Nong	Saveu	F	300,000.00
Nong	Saveu	F	500,000.00

Table 29. *Expressed broom grass income from individual interviews in target CCA villages in Sepon and Nong.*

Observed individual lack of Broom grass production in Tangalai village (Nong) is directly linked to the increase in this village's cassava production (refer to Cassava section of this report).

A. Potentials of target area in broom grass value chain

- Broom grass need little inputs (beyond labor) by the villagers.
- As it is mostly destined for the nearby Vietnam, this close proximity is beneficial in reducing transportation costs.
- Due to its light weight compared to other products, it is easy to load, store and process.
- Broom grass can be easily accessible and harvested by all villagers and production is only limited by available household labor force. As long as broom grass areas are well allocated by PLUP, deforestation for broom grass area can be prevented. Enforcement

of PLUP (by village authority and forestor) and NAP regulations (by relevant authorities) for villages such as Thamae and Saveu could reduce threats of deforestration.

- Broom grass plays an important source of supplemental income for poor farmers, particularly women and vulnerable people in upland ethnic communities Kaenghouapha, Thammae, and Saveu.
- Some farmers (particularly those in Kaenghouapha, Thammae and Saveu) are already cultivating broom grass in their own land especially in upland rice and cassava cultivation areas. With improved income from organized broom grass production and trade, these villages may reduce their need for slash-and-burn areas for cassava production in favor of lower input costs needed for broom grass production.
- Broom grass has value added potential through processing it into sweepers. This has shown promise domestic consumers.

B. Major challenges of target area in broom grass value chain

- Currently, cassava production in the project target areas (particularly in Tangalai village and slowly in other upland CCA villages of Kaenghouapha, Thamae and Saveu) where cassava production is being piloted. It has resulted in increased land clearing, deforestation, and increased slash-and-burn practices. It also translates to reduced broom grass cultivation areas and imposed new challenges for villagers seeking income generating activities from this economically-beneficial grass, specifically:
    - Farmers needs to travel longer distance from the villages to reach areas with broom grass
- It is difficult to promote farmers to cultivate broom grass in villages such as Tangalai due to the attractiveness of cassava cultivation. However, this is less a challenge for poor and vulnerable villagers who lack land and financial resources to purchase cassava production inputs.
- As Thamae and Saveu villages' lands are mostly within the Dong Phou Vieng National Protect Area, this significantly limits the ability for allocating land areas for extensive broom grass production unless special permission by relevant NPA authorities are provided (such as those provided for WCS' guardian villages in Nam Et Pou Leuy NPA).

XIX. Results: Recommendations for promoting and supporting of diversified and alternative livelihoods linked to Broom grass Value Chain for the 5 CCA Target Villages

The following recommendations are proposed to promote each specific CCA target villages to adopt alternative broom grass livelihood activities while increasing their climate resilience and reducing slash-and burn practices.

- In Kaenghouapha: Conduct or update village land use planning that also allocate broom grass areas for production and commercialization. As broom grass can tolerate drought conditions and can grow on hilly lands, the areas allocated could be based on villagers access. ***Similar action can be taken in Thamae and Saveu but provided a special permission is granted by the NPA authorities*** understanding that having such planning could ensure legal production of broomgrass in only designated areas. The experience of WCS' guardian villages involved in broomgrass production in Nam Et Pou Leuy NPA may be applicable here.

- For Kaenghouapha, Thamae and Saveu: Value added processing steps such as sweeper production to increase economic returns from broom grass beyond the current harvest and sell practice. With increase value addition and income, this would reduce the need to harvest large areas to sell raw broomgrass in large quantities, thus minimizing potential for deforestation.
- In Kaenghouapha, Thamae and Saveu: Development of producer groups with technical training on both broom grass management and value added processing techniques (such as making sweepers). Value added processing could particularly benefit women and vulnerable people.
- As Tangalai village is already focus on cassava production while Meunghong village already have diversified lucrative livelihoods (lowland rice, cattle, and cassava), support for broom grass production is not recommended for these villages.
- In three proposed ethnic upland villages of Kenghouapha, Thamae, and Saveu, as broom grass production and selling are equally conducted by women, gender empowerment and improved production skills training (such as for sweepers) should be provided to villages' women to take on leadership roles in the village productions. This could also support to reduce their socio-economic difficulties that are expressed during Session/Task 0 gender focus group interviews.
- In previously slash-and-burn areas, broom grass can be intercropped with pigeon peas (for soil nitrogen fixation characteristics) which have been shown to improve soil conditions, provide forage for livestock, while providing economic returns for target villages of Kenghouapha, Thamae, and Saveu.

XX. Annex 1: Interviews guideline (Lao)

ຟອມ A

ແບບຟອມສຳພາດ ສົນທະນາກຸ່ມ

ວັນ, ເດືອນ, ປີເກັບກຳຂໍ້ມູນ

.....

ຊື່ບ້ານ.....ເມືອງ.....

ຈຳນວນຜູ້ເຂົ້າຮ່ວມ.....ຊາຍ.....ຍິງ.....

ເພດຊາຍ	**ເພດຍິງ**
1. ຊື່.....	1. .....
2.	2.....
3.	3.....
4.	4.....
5.	5.....

I. ຂໍ້ມູນທົ່ວໄປ

1.1. ທ່ານບອກໄດ້ບໍວ່າບ້ານຂອງທ່ານມີການຜະລິດກະສິກຳ ພືດ ແລະສັດທີ່ພົ້ນເດັ່ນຫຍັງແດ່?

ລ/ດ	ປະເພດການຜະລິດ	ຈ/ນຄອບຄົວຜະລິດ	ຈ/ນຄຄທີ່ຜ/ລຫຼາຍສຸດ	ລາຍໄດ້ສະເລ່ຍ/ຄອບຄົວ	ລາຍໄດ້ສູງສຸດ	ລາຍໄດ້ຕ່ຳສຸດ
1						
2						
3						
4						
5						
6						

1.2. ບ້ານຂອງທ່ານໄດ້ມີການເກັບເຄື່ອງປ່າຂອງດົງທີ່ສາມາຂາຍ ແລະສ້າງລາຍຮັບມີຫຍັງແດ່?

ລ/ດ	ປະເພດຜະລິດຕະພັນ	ຈ/ນຄອບຄົວທີ່ຫາ	ຈ/ນຄຄທີ່ຫຼາຍສຸດ	ລາຍໄດ້ສະເລ່ຍ/ຄອບຄົວ	ລາຍໄດ້ສູງສຸດ	ລາຍໄດ້ຕ່ຳສຸດ
1						
2						
3						
4						
5						
6						

1.3. ນອກຈາກການຜະລິດກະສິກຳ ແລະເກັບເຄື່ອງປ່າຂອງດົງບ້ານຂອງທ່ານໄດ້ມີ ກິດຈະກຳອື່ນໆບໍທີ່ສາມາດສ້າງລາຍຮັບແກ່ຄອບຄົວເຊັ່ນ: ຕ່ຳໜູກ, ຈັກສານ.....?

.....

.....

1.4. ປະຕິທິນໃນການຂາຍຜະລິດຕະພັນພາຍໃນບ້ານຂອງທ່ານມີຄືແນວໃດ?

ລາຍການ	ເດືອນ											
	1	2	3	4	5	6	7	8	9	10	11	12

1.5. ຜະລິດຕະພັນທີ່ເປັນບຸລິມະສິດໃນການສ້າງລາຍຮັບໃຫ້ແກ່ຄອບຄົວພາຍໃນບ້ານຂອງທ່ານມີຜະລິດຕະພັນຫຍັງແດ່? ຈົ່ງຊ່ວຍຈັດລຽງ 5 ອັນດັບໆ

- ອັນດັບທີ1: .....ຈຳນວນຄອບຄົວ.....
- ອັນດັບທີ2: .....ຈຳນວນຄອບຄົວ.....
- ອັນດັບທີ3: .....ຈຳນວນຄອບຄົວ.....
- ອັນດັບທີ4: .....ຈຳນວນຄອບຄົວ.....
- ອັນດັບທີ5: .....ຈຳນວນຄອບຄົວ.....

II. ຂໍ້ມູນສະເພາະການຂາຍ

2.1. ບັນດາຜະລິດຕະພັນທີ່ເປັນບໍລິມະສິດຂ້າງເທິງ ພາຍໃນບ້ານຂອງທ່ານທ່ານໄດ້ຂາຍໃຫ້ໃຜແດ່?

1) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
2) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
3) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
4) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
5) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
6) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
7) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
8) ຊື່.....ເບີໂທ.....ມາແຕ່ໃສ.....
9) .....

2.2. ທ່ານຮູບໍ່ວ່າພໍ່ຄ້າດັ່ງກ່າວ ຂາຍຜະລິດຕະພັນທີ່ຊື້ຈາກບ້ານ ໄປຂາຍທາງໃດຕໍ່?

.....

.....

.....

2.3. ໃນຂະບວນການ ຫຼື ຮູບແບບການຊື້ເຊັ່ນ, ການຕິດຕໍ່ພົວພັນ, ການຕັ້ງລາຄາ, ການຕໍ່ລອງລາຄາ, ການຄັດເລືອກຄຸນນະພາບ, ປະລິມານການຊື້, ການຈ່າຍ, ການຂົນສົ່ງ ແລະອື່ນໆ ເປັນຄືແນວໃດ?

.....

.....

.....

2.4. ໃນຂະບວນການຂາຍເຊັ່ນ, ການຕິດຕໍ່ພົວພັນ, ການຕັ້ງລາຄາ, ການຕໍ່ລອງລາຄາ, ການຮັບເງິນ, ແລະ ການທ້ອນເງິນແມ່ນໃຜເປັນຜູ້ຈັດການ? ຍິງ/ຊາຍ

.....

2.5. ການຂາຍຜະລິດຕະພັນພາຍໃນບ້ານຂອງທ່ານມີຂໍ້ສະດວກ, ຂໍ້ຫຍຸ້ງຍາກ ແລະ ສິ່ງທ້າທາຍຫຍັງແດ່?

.....

.....

.....

.....

ຟອມ B

ຂໍຂອບໃຈ

ແບບຟອມສຳພາດ ຜູ້ຜະລິດ

ວັນ, ເດືອນ, ປີເກັບກຳຂໍ້ມູນ

.....

ລຳດັບ.....ບ້ານ.....ເມືອງ.....

ຊື່ຜູ້ໃຫ້ສຳພາດ.....ເພດ.....ອາຍຸ.....ເບີໂທ.....

ປະເພດຂອງຜະລິດຕະພັນສຶກສາ:: ข..... ข..... ข .....

I. ຂໍ້ມູນທົ່ວໄປ

1.1. ໃນບັນດາກິດຈະກຳຂ້າງລຸ່ມນີ້ ມີກິດຈະກຳໃດແດ່ທີ່ຄອບຄົວຂອງທ່ານເຮັດເປັນຕົ້ນຕໍ?

	ຜົນຜະລິດ/ປີ	ທ່ານໄດ້ຂາຍບໍ່?	ຖ້າຂາຍ, ລາຍຮັບຈາກການຂາຍຜະລິດຕະພັນດັ່ງກ່າວແມ່ນເທົ່າໃດ/ປີ?
ຜະລິດເຂົ້າ		ขYes ขNo	
ເຮັດສວນ		ขYes ขNo	
ໄມ້ແລະພືດອຸດສາຫະກຳ		ขYes ขNo	
ງົວ/ຄວາຍ		ขYes ขNo	
ໝູ		ขYes ขNo	
ແບ້		ขYes ขNo	
ສັດປີກ		ขYes ขNo	
ເກັບເຄື່ອງປ່າຂອງດົງ		ขYes ขNo	
ຄ້າຂາຍ		ขYes ขNo	
ຮັບຈ້າງທົ່ວໄປ			
ອື່ນໆ1 (.....)			
ອື່ນໆ2 (.....)			

1.2. 3 ກິດຈະກຳທີ່ສ້າງລາຍຮັບຕົ້ນຕໍໃຫ້ກັບຄອບຄົວຂອງທ່ານແມ່ນມີກິດຈະກຳໃດແດ່?

1.....

2.....

3.....

II. ຂໍ້ມູນກ່ຽວກັບການຂາຍຜະລິດຕະພັນສິກສາ (ຜູ້ສຳພາດລຸ່ມ)

.....

2.1. ໃນປີທີ່ຜ່ານມາ, ທ່ານໄດ້ຂາຍຜະລິດຕະພັນສິກສາ ..... ໃຫ້ໃຜແດ່?

	ຜູ້ຊື້	ປະລິມານຂາຍ (/ປີ)	ລາຄາຂາຍ(ຕ່ຳ ສຸດ -ສູງສຸດ)	ຊ່ວງເວລາ ຂາຍ	ຈຳນວນຄັ້ງທີ່ ຂາຍຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນ ຂາຍ
1	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
2	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
3	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
4	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
5	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					

III. ວິທີການຂາຍຜະລິດຕະພັນ

3.1.ການກຳນົດລາຄາຂາຍແມ່ນໃຊ້ຄຸນລັກສະນະໃດ?	....
3.2. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຂາຍ?	˚ ຕົນເອງ ˚ ລູກຄ້າ
3.3. ໃນໜຶ່ງປີທີ່ຜ່ານມາ, ລາຄາຂາຍມີການປ່ຽນແປງບໍ່?	˚ ມີ ˚ ບໍ່ມີ
ຖ້າມີ, ລາຄາສູງສຸດ, ສະເລ່ຍ ແລະ ຕ່ຳສຸດໃນປີການີ້ແມ່ນ ເທົ່າໃດ?	ສູງສຸດ: ..... ສະເລ່ຍ: ..... ຕ່ຳສຸດ: .....

IV. ຕົ້ນທຶນການຜະລິດ ແລະ ຄ່າໃຊ້ຈ່າຍໃນການຂາຍຜະລິດຕະພັນ

4.1. ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່ໃນການຂາຍຜະລິດຕະພັນ ..... ? ˚ ມີ ˚ ບໍ່ມີ

- ຖ້າມີ, ມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່?

	ປະເພດຄ່າໃຊ້ຈ່າຍ	ຕົ້ນທຶນ		ປະເພດຄ່າໃຊ້ຈ່າຍ	ຕົ້ນທຶນ

		(ກີບ/ໜ່ວຍ)			(ກີບ/ໜ່ວຍ)
1			6		
2			7		
3			8		
4			9		
5			10		

V. ການພົວພັນລະຫວ່າງຜູ້ຊື້ແລະຜູ້ຂາຍ

5.1. ກະລຸນາບອກລະດັບຄວາມເຊື່ອໝັ້ນຂອງທ່ານທີ່ມີຕໍ່ຜູ້ທີ່ມາຊື້ຜະລິດຕະພັນນຳທ່ານ?

	ຊື່ຜູ້ຊື້	ລະດັບຄວາມເຊື່ອໝັ້ນຂອງທ່ານທີ່ມີຕໍ່ກັບຜູ້ຊື້ແມ່ນຢູ່ໃນລະດັບໃດ?(0 = ບໍ່ເຊື່ອ, 3 = ເຊື່ອທີ່ສຸດ)	ທ່ານໄດ້ມີຂໍ້ຕົກລົງພິເສດກັບຜູ້ຊື້ບໍ່?	ທ່ານມີສາຍພົວພັນພິເສດກັບຜູ້ສະໜອງບໍ່?	ຖ້າມີ, ແມ່ນສາຍພົວພັນແບບໃດ?
1		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
2		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
3		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
4		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
5		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
...					

5.2. ແຫຼ່ງຂໍ້ມູນຂ່າວສານການຕະຫຼາດ ທ່ານຮັບຮູ້ນຳພາກສ່ວນໃດໃນລຸ່ມນີ້?

	ແຫຼ່ງຂໍ້ມູນ	ขYes ขNo		ແຫຼ່ງຂໍ້ມູນ	ขYes ขNo
1	ຄອບຄົວ	ขYes ขNo	6	ພໍ່ຄ້າ	ขYes ขNo
2	ໝູ່ເພື່ອນ ແລະເພື່ອນບ້ານ	ขYes ขNo	7	ໂທລະພາບ,ວິທະຍຸ	ขYes ขNo
3	ການສົ່ງເສີມລັດ, ເອກະຊົນ	ขYes ขNo	8	ເຟັກບຸກ	ขYes ขNo
4	ອົງການຈັດສາກົນ	ขYes ขNo	9	ອອດແອບ	ขYes ขNo
5	ກຸ່ມຊາວກະສິກອນ	ขYes ขNo	10	ອື່ນໆ.....	ขYes ขNo

VI. ບັນຫາໃນການຄ້າຂາຍ

6.1. ໃນລະຫວ່າງ 3 ປີ ຫຼັງ, ທ່ານເຄີຍພົບບັນຫາໃນການຊື້ຂາຍຜະລິດຕະພັນບໍ່? ข ມີ ข ບໍ່ມີ

ຖ້າມີ,ແມ່ນບັນຫາແບບໃດ

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ຂໍຂອບໃຈ

ຟອມ c

ແບບສຳພາດ - ຜູ້ເກັບຊື້ພາຍໃນບ້ານ ແລະ ເມືອງ

ວັນ, ເດືອນ, ປີເກັບກຳຂໍ້ມູນ

.....

ລຳດັບ.....ບ້ານ.....ເມືອງ.....

ຊື່ຜູ້ໃຫ້ຂໍ້ມູນ.....ອາຍຸ..... ເພດ.....ລະດັບການສຶກສາ.....

ເບີໂທລະສັບ....., ທີ່ຢູ່ປະຈຸບັນ.....

ປະເພດຂອງຜະລິດຕະພັນສຶກສາ: ข..... ข..... ข .....

I. ຂໍ້ມູນທົ່ວໄປ

1.1. ອາຊີບຕົ້ນຕໍ່ທີ່ທ່ານເຮັດມີຫຍັງແດ່?

	ກິດຈະກຳ	ປີທີເລີ່ມ´		ກິດຈະກຳ	ປີທີເລີ່ມ´
1			4		
2			5		
3			6		

1.2. ທ່ານເກັບຊື້ຜະລິດຕະພັນປະເພດໃດແດ່?

	ປະເພດຜະລິດຕະພັນ	ປະລິມານ (/ປີ)	ປີທີ່ເລີ້ມ		ປະເພດຜະລິດຕະພັນ	ປະລິມານ (/ປີ)	ປີທີ່ເລີ້ມ
1				6			
2				7			
3				8			
4				9			
5				10			

II. æÓ–´ø––i¼ú¸iñ®i¾–¦½Î°¤° ½ìò©–ª½²ñ–¦ôi¦¾

2.1. Ã––¯ó€†–° È¾––´¾, –êÈ¾––Àiñ®– § œ° ½ìò©–ª½²ñ––¦ôi¦¾

..... ´¾–ÁªÈ–Ã¦ –Áì½ –iñ®–Ã° ?

	ຜູ້ຂາຍ	ປະລິມານຊື້ (/ປີ)	ລາຄາຊື້ (ຕ່ຳສຸດ _ ສູງສຸດ)	ຊ່ວງເວລາຊື້	ຈຳນວນຄັ້ງທີ່ຊື້ຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນຊື້
1.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
2.	ຊື່..... ທີ່ຢູ່.....					

	ເບີໂທ.....					
3.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					

2.2.

	ຊື່ຜູ້ສະໜອງ	ລະດັບຄວາມເຊື່ອໝັ້ນຂອງທ່ານທີ່ມີຕໍ່ກັບຜູ້ສະໜອງແມ່ນຢູ່ໃນລະດັບໃດ?(0 = ບໍ່ເຊື່ອ, 3 = ເຊື່ອທີ່ສຸດ)	ທ່ານໄດ້ມີຂໍ້ຕົກລົງພິເສດກັບຜູ້ສະໜອງບໍ?	ທ່ານມີສາຍພົວພັນພິເສດກັບຜູ້ສະໜອງບໍ?	ຖ້າມີ, ແມ່ນສາຍພົວພັນແບບໃດ?
1.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
2.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
3.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
4.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
5.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
6		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
7		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
8		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
9		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
10		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....

2.3. ທ່ານໄດ້ສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆ (ແນວພັນ, ສິ່ງນຳເຂົ້າ, ສິນເຊື່ອ ຫຼື ອື່ນໆ) ໃຫ້ກັບຜູ້ສະໜອງບໍ?

ข ມີ ข ບໍ່ມີ

ຖ້າມີແມ່ນໃນຮູບການໃດແລະໃຫ້ໃຜ?.....

.....

2.4. ເວລາເກັບຊື້, ທ່ານເລືອກຊື້ຜະລິດຕະພັນທີ່ມີຄຸນລັກສະນະຄືແນວໃດ?

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2.5. ຜະລິດຕະພັນທີ່ທ່ານເກັບຊື້ມາໃນປະຈຸບັນແມ່ນສາມາດຕອບສະໜອງຄຸນນະພາບທີ່ທ່ານຕ້ອງການໄດ້ບໍ?

ข ແມ່ນ ข ບໍ່ແມ່ນ ข ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້

ຖ້າບໍ່ໄດ້, ແມ່ນຄຸນລັກສະນະໃດທີ່ທ່ານຍັງບໍ່ພໍ
ໃຈ?.....
.....
ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້ ຊ່ວຍອະທິບາຍເຫດຜົນໄດ້ບໍ?
.....
.....

2.6.ວິທີການຊື້

2.6.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຊື້?	˚ ຂ້ອຍເອງ ˚ ຜູ້ຂາຍ
2.6.3.ລາຄາຊື້ແມ່ນມີການປ່ຽນແປງໄປຕາມລາຄາຕະຫຼາດບໍ່?	˚ ແມ່ນ ˚ ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີການີ້ແມ່ນເທົ່າໃດ?	ສູງສຸດ: ..... ສະເລ່ຍ: ..... ຕ່ຳສຸດ: .....

III. ຂໍ້ມູນການຂາຍຜະລິດຕະພັນ

3.1. ໃນປີທີ່ຜ່ານມາ, ທ່ານຂາຍຜະລິດຕະພັນສຶກສາໄປໃສ ແລະ ໃຫ້ໃຜແດ່?

	ຜູ້ຊື້	ປະລິມານຂາຍ (/ປີ)	ລາຄາຂາຍ (ຕ່ຳສຸດ _ ສູງສຸດ)	ຊ່ວງເວລາຂາຍ	ຈຳນວນຄັ້ງທີ່ຂາຍຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນຂາຍ
1.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
2.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
3.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					

3.2. ທ່ານໄດ້ສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆ (ສິນເຊື່ອ, ຂົນສົ່ງ ຫຼື ອື່ນໆ) ໃຫ້ກັບລູກຄ້າຂອງທ່ານບໍ່?

˚ ແມ່ນ ˚ ບໍ່ແມ່ນ

ຖ້າມີແມ່ນໃນຮູບການໃດ?

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3.3.ວິທີການຂາຍ

3.3.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຂາຍ?	▢ ຂ້ອຍເອງ ▢ ຜູ້ຂາຍ
3.3.2. ໃນໜຶ່ງປີ, ລາຄາຂາຍແມ່ນມີການປ່ຽນແປງບໍ່	▢ ແມ່ນ ▢ ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີການີ້ແມ່ນເທົ່າໃດ	ສູງສຸດ: ..... ສະເລ່ຍ: ..... ຕ່ຳສຸດ: .....

IV. ຕົ້ນທຶນໃນການເກັບຊື້ ແລະຄ່າໃຊ້ຈ່າຍໃນການຂາຍຜະລິດຕະພັນ

4.1. ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່ໃນການຊື້/ຂາຍຜະລິດຕະພັນ? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ

- ຖ້າມີ, ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່?

	ປະເພດຄ່າໃຊ້ຈ່າຍ	ການຊື້	ການຂາຍ
		ຕົ້ນທຶນ(ກີບ/ຖ້ຽວ)	ຕົ້ນທຶນ(ກີບ/ຖ້ຽວ)
1	ຄ່າຂົນສົ່ງ		
2	ຄ່າທຳນຽມຕ່າງໆ (ຄ່າພາສີ, ຄ່າທຳນຽມ, ອື່ນໆ)		
3	ຄ່າຕິດຕໍ່ພົວພັນ		
4	ອື່ນໆ.....		
5	ອື່ນໆ.....		
6	ອື່ນໆ.....		
7	ອື່ນໆ.....		
8	ອື່ນໆ.....		
9	ອື່ນໆ.....		
10	ອື່ນໆ.....		

V. ບັນຫາໃນການຄ້າຂາຍ

5.1. ໃນລະຫວ່າງ 3 ປີ ຫຼັງ, ທ່ານເຄີຍພົບບັນຫາໃນການຊື້ຂາຍຜະລິດຕະພັນບໍ່? ▢ ມີ ▢ ບໍ່ມີ

ຖ້າມີ,ແມ່ນບັນຫາໃດແດ່?.....

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ຂໍຂອບໃຈ

ຟອມ D

ແບບສຳພາດ - ຜູ້ແປຮູບ

ວັນ, ເດືອນ, ປີເກັບກຳຂໍ້ມູນ

.....

ລຳດັບ.....ບ້ານ.....ເມືອງ.....
ຊື່ຜູ້ໃຫ້ຂໍ້ມູນ.....ອາຍຸ..... ເພດ.....ລະດັບການສຶກສາ.....
ເບີໂທລະສັບ....., ທີ່ຢູ່ປະຈຸບັນ.....

ປະເພດຂອງຜະລິດຕະພັນສຶກສາ: ຂ……. ຂ..... ຂ .....

I. ຂໍ້ມູນທົ່ວໄປ

1.1. ອາຊີບຕົ້ນຕໍ່ຂອງທ່ານແມ່ນຫຍັງ?

	ກິດຈະກຳ	ປີທີ່ເລີ່ມ´		ກິດຈະກຳ	ປີທີ່ເລີ່ມ´
1			4		
2			5		
3			6		

1.2. ທ່ານແປຮູບຜະລິດຕະພັນປະເພດໃດແດ່?

	ປະເພດ ຜະລິດຕະພັນ	ປະລິມານ (/ຄັ້ງ)	ປະລິມານ (ຄັ້ງ/ປີ)	ປີທີ່ເລີ້ມ		ປະເພດ ຜະລິດຕະພັນ	ປະລິມານ (/ຄັ້ງ)	ປະລິມານ (ຄັ້ງ/ປີ)	ປີທີ່ເລີ້ມ
1					4				
2					5				
3					6				

1.3. ຜະລິດຕະພັນສຶກສາ ..... ແມ່ນຜະລິດຕະພັນຕົ້ນຕໍ່ທີ່ທ່ານແປຮູບບໍ່ ? ຂ ມີ ຂ ບໍ່ມີ

II. ຂໍ້ມູນກ່ຽວກັບການສະໜອງຜະລິດຕະພັນ

2.1. ໃນປີທີ່ຜ່ານມາ, ແມ່ນໃຜເປັນຜູ້ສະໜອງຜະລິດຕະພັນສຶກສາ ..... ໃຫ້ທ່ານເພື່ອແປຮູບ?

	ຜູ້ສະໜອງ	ປະລິມານຊື້ (/ປີ)	ລາຄາຊື້ (ຕ່ຳສຸດ-ສູງສຸດ)	ຊ່ວງເວລາຊື້	ຈຳນວນຄັ້ງທີ່ຊື້ຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນຊື້
1.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
2.	ຊື່.....					

	ທີ່ຢູ່..... ເບີໂທ.....					
3.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					

2.2. ທ່ານເຄີຍໄດ້ເກັບຊື້ຜະລິດຕະພັນດ້ວຍຕົວທ່ານເອງບໍ່? ข ແມ່ນ ข ບໍ່ແມ່ນ
ຖ້າຊື້, ແມ່ນຢູ່ເຂດໃດ ແລະ ຍ້ອນຫຍັງ?

.....
.....

2.–3. ***ລະດັບຄວາມເຊື່ອໝັ້ນ***

	ຊື່ຜູ້ສະໜອງ	ລະດັບຄວາມເຊື່ອໝັ້ນຂອງທ່ານທີ່ມີຕໍ່ກັບຜູ້ສະໜອງແມ່ນຢູ່ໃນລະດັບໃດ?(0 = ບໍ່ເຊື່ອ, 3 = ເຊື່ອທີ່ສຸດ)	ທ່ານໄດ້ມີຂໍ້ຕົກລົງພິເສດກັບຜູ້ສະໜອງບໍ່?	ທ່ານມີສາຍພົວພັນພິເສດກັບຜູ້ສະໜອງບໍ່?	ຖ້າມີ, ແມ່ນສາຍພົວພັນແບບໃດ?
1.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
2.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
3.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
4.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
5.		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
6		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
7		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
8		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
9		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....
10		ข 0 ข 1 ข2 ข 3	ขYes ขNo	ขYes ขNo	.....

2.4. ເວລາທີ່ທ່ານຊື້ຜະລິດຕະພັນ, ທ່ານເລືອກຊື້ຜະລິດຕະພັນທີ່ມີຄຸນລັກສະນະຄືແນວໃດ?

.....

2.5. ຜະລິດຕະພັນທີ່ທ່ານເກັບຊື້ມາໃນປະຈຸບັນແມ່ນສາມາດຕອບສະໜອງຄຸນນະພາບທີ່ທ່ານຕ້ອງການໄດ້ບໍ່?ข ແມ່ນ ข ບໍ່ແມ່ນ ข ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້

ຖ້າບໍ່ໄດ້, ແມ່ນຄຸນລັກສະນະໃດທີ່ທ່ານຍັງບໍ່ພໍ
ໃຈ?.....
.....

ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້ ຊ່ວຍອະທິບາຍເຫດຜົນໄດ້ບໍ?
.....
.....

2.6.ວິທີການຊື້

2.6.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຊື້?	ข ຂ້ອຍເອງ ข ຜູ້ຂາຍ
2.6.3.ລາຄາຊື້ແມ່ນມີການປ່ຽນແປງໄປຕາມລາຄາຕະຫຼາດບໍ່?	ข ແມ່ນ ข ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີກາຍນີ້ແມ່ນເທົ່າໃດ?	ສູງສຸດ:..... ສະເລ່ຍ:..... ຕ່ຳສຸດ:.....

2.7. ທ່ານສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆ (ແນວພັນ, ສິ່ງນຳເຂົ້າ, ສິນເຊື່ອ ຫຼື ອື່ນໆ) ໃຫ້ກັບຜູ້ສະໜອງ ບໍ່?

ข ແມ່ນ ข ບໍ່ແມ່ນ

ຖ້າມີແມ່ນໃນຮູບການໃດ?
.....
.....

III. ຂໍ້ມູນກ່ຽວກັບການແປຮູບ

3.1.ຄວາມສາມາດໃນການຜະລິດຂອງທ່ານແມ່ນເທົ່າໃດ(ໂຕນ/ມື້ ຫລື/ປີ)?
.....

3.2 ຜະລິດຕະພັນທີ່ທ່ານໄດ້ຮັບຈາກການແປຮູບມີຜະລິດຕະພັນໃດແດ່?

	ປະເພດຜະລິດຕະພັນ	% ຫຼື Kg	ທ່ານໄດ້ຂາຍບໍ່	ຖ້າຂາຍ, ຂາຍໃນລາຄາ ເທົ່າໃດ?
1			ขYes ขNo	
2			ขYes ขNo	
3			ขYes ขNo	
4			ขYes ขNo	
5			ขYes ขNo	
6			ขYes ขNo	
7			ขYes ขNo	
8			ขYes ขNo	
9			ขYes ขNo	
10			ขYes ขNo	

IV. ຂໍ້ມູນເກັບກັບການຂາຍຜະລິດຕະພັນ

4.1. ໃນປີທີ່ຜ່ານມາ, ທ່ານໄດ້ຂາຍຜະລິດຕະພັນສິກສາ .....ໄປໃສແລະໃຫ້ໃຜແດ່ (ແມ່ຄ້າທົ່ວໄປ, ຮ້ານອາຫານ, ຜູ້ແປຮູບອາຫານ, ທະຫານ, ອື່ນໆ) ?

	ປະເພດລູກຄ້າ(ແມ່ຄ້າທົ່ວໄປ, ຮ້ານອາຫານ, ຜູ້ແປຮູບອາຫານ, ທະຫານ, ອື່ນໆ	ປະລິມານຂາຍ (/ປີ)	ລາຄາຂາຍ (ຕ່ຳສຸດ _ ສູງສຸດ)	ຊ່ວງເວລາຂາຍ	ຈຳນວນຄັ້ງທີ່ຂາຍຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນຂາຍ
1.	ປະເພດລູກຄ້າ..... ທີ່ຢູ່..... ເບີໂທ.....					
2.	ປະເພດລູກຄ້າ..... ທີ່ຢູ່..... ເບີໂທ.....					
3.	ປະເພດລູກຄ້າ..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ປະເພດລູກຄ້າ..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ປະເພດລູກຄ້າ..... ທີ່ຢູ່..... ເບີໂທ.....					

4.2.ວິທີການຂາຍ

4.2.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຂາຍ?	ข ຂ້ອຍເອງ ข ຜູ້ຂາຍ
4.2.3.ລາຄາຂາຍແມ່ນມີການປ່ຽນແປງໄປຕາມລາຄາຕະຫຼາດບໍ່?	ข ແມ່ນ ข ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີການີ້ແມ່ນເທົ່າໃດ?	ສູງສຸດ: ..... ສະເລ່ຍ: ..... ຕ່ຳສຸດ: .....

4.3. ທ່ານສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆ (ສິນເຊື່ອ, ຂົນສົ່ງ ຫຼື ອື່ນໆ) ໃຫ້ກັບລູກຄ້າ? ข ແມ່ນ ข ບໍ່ແມ່ນ

ຖ້າມີ ແມ່ນໃນຮູບການ ໃດ?.....

.....

V. ຕົ້ນທຶນແລະຄ່າໃຊ້ຈ່າຍໃນການຂາຍຜະລິດຕະພັນ

5.1. ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່ໃນການຊື້/ຂາຍຜະລິດຕະພັນ? ข ແມ່ນ ข ບໍ່ແມ່ນ

- ຖ້າມີ, ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່?

	ປະເພດຄ່າໃຊ້ຈ່າຍ	ການຊື້	ການຂາຍ
		ຕົ້ນທຶນ(ກີບ/ຖ້ຽວ)	ຕົ້ນທຶນ(ກີບ/ຖ້ຽວ)
1	ຄ່າຂົນສົ່ງ		
2	ຄ່າທຳນຽມຕ່າງໆ (ຄ່າພາສີ, ຄ່າທຳນຽມ, ອື່ນໆ)		
3	ຄ່າຕິດຕໍ່ພົວພັນ		
4	ອື່ນໆ.....		
5	ອື່ນໆ.....		
6	ອື່ນໆ.....		
7	ອື່ນໆ.....		
8	ອື່ນໆ.....		
9	ອື່ນໆ.....		
10	ອື່ນໆ.....		

VI. ບັນຫາໃນການຄ້າຂາຍ

6.1. ໃນລະຫວ່າງ 3 ປີ ຫຼັງ, ທ່ານເຄີຍພົບບັນຫາໃນການຊື້ຂາຍຜະລິດຕະພັນບໍ່? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ

ຖ້າມີ, ແມ່ນບັນຫາແບບໃດ.....

.....

ຂໍຂອບໃຈ

ຟອມ E

ແບບສຳພາດ - ຜູ້ຂາຍຍ່ອຍ

ວັນ,ເດືອນ, ປີ ສຳພາດ.....

ລຳດັບ.....ບ້ານ.....ເມືອງ.....

ຊື່ຜູ້ໃຫ້ຂໍ້ມູນ.....ອາຍຸ..... ເພດ.....ລະດັບການສຶກສາ.....

ເບີໂທລະສັບ....., ທີ່ຢູ່ປະຈຸບັນ.....

ປະເພດຂອງຜະລິດຕະພັນສຶກສາ: ຂ..... ຂ..... ຂ .....

I. ຂໍ້ມູນທົ່ວໄປ

1.1. ອາຊີບຕົ້ນຕໍ່ຂອງທ່ານແມ່ນຫຍັງ?

	ກິດຈະກຳ	ປີທີ ເລີ້ມ		ກິດຈະກຳ	ປີທີ ເລີ້ມ
1			4		
2			5		
3			6		

1.2. ທ່ານຂາຍຜະລິດຕະພັນປະເພດໃດແດ່?

	ປະເພດ ຜະລິດຕະພັນ	ປະລິມານ (/ຄັ້ງ)	ປະລິມານ (ຄັ້ງ/ປີ)	ປີທີ່ ເລີ່ມ		ປະເພດ ຜະລິດຕະພັນ	ປະລິມານ (/ຄັ້ງ)	ປະລິມານ (ຄັ້ງ/ປີ)	ປີທີ່ ເລີ່ມ
1					6				
2					7				
3					8				
4					9				
5					10				

1.3. ຜະລິດຕະພັນສຶກສາ ..... ແມ່ນຜະລິດຕະພັນຕົ້ນຕໍທີ່ທ່ານຂາຍບໍ່ ? ຂ ແມ່ນ ຂ ບໍ່ແມ່ນ

II. ຂໍ້ມູນກ່ຽວກັບການສະໜອງຜະລິດຕະພັນ

2.1. ໃນປີທີ່ຜ່ານມາ, ແມ່ນໃຜເປັນຜູ້ສະໜອງຜະລິດຕະພັນສຶກສາ ..... ?

	ຜູ້ສະໜອງ	ປະລິມານຊື້ (/ປີ)	ລາຄາຊື້ (ຕ່ຳສຸດ-ສູງສຸດ)	ຊ່ວງເວລາຊື້	ຈຳນວນຄັ້ງທີ່ຊື້ຕໍ່ປີ	ປີທີ່ເລີ່ມ ຕົ້ນຊື້
1.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
2.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
3.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ຊື່..... ທີ່ຢູ່..... ເບີໂທ.....					

2.2. ທ່ານເຄີຍໄດ້ເກັບຊື້ຜະລິດຕະພັນດ້ວຍຕົວທ່ານເອງບໍ່? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ
ຖ້າແມ່ນ ທ່ານຊື້ມາແຕ່ເຂດໃດ ແລະ ຍ້ອນຫຍັງ?

.....
.....

2.3. ***ລະດັບຄວາມເຊື່ອໝັ້ນ***

	ຊື່ຜູ້ສະໜອງ	ລະດັບຄວາມເຊື່ອໝັ້ນຂອງທ່ານທີ່ມີຕໍ່ກັບຜູ້ສະໜອງແມ່ນຢູ່ໃນລະດັບໃດ?(0= ບໍ່ເຊື່ອ, 3= ເຊື່ອທີ່ສຸດ)	ທ່ານໄດ້ມີຂໍ້ຕົກລົງພິເສດກັບຜູ້ສະໜອງບໍ່?	ທ່ານມີສາຍພົວພັນພິເສດກັບຜູ້ສະໜອງບໍ່?	ຖ້າມີ, ແມ່ນສາຍພົວພັນແບບໃດ?
1.		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
2.		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
3.		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
4.		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
5.		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
6		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
7		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
8		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
9		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....
10		▢ 0 ▢ 1 ▢2 ▢ 3	▢Yes ▢No	▢Yes ▢No	.....

2.4. ເວລາທີ່ທ່ານຊື້ຜະລິດຕະພັນ, ທ່ານເລືອກຊື້ຜະລິດຕະພັນທີ່ມີຄຸນລັກສະນະຄືແນວໃດ?

.....

.....

2.5. ຜະລິດຕະພັນທີ່ທ່ານເກັບຊື້ມາໃນປະຈຸບັນແມ່ນສາມາດຕອບສະໜອງຄຸນນະພາບທີ່ທ່ານຕ້ອງການໄດ້ບໍ່?ข ແມ່ນ ข ບໍ່ແມ່ນ ข ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້

ຖ້າບໍ່ແມ່ນ, ແມ່ນຄຸນລັກສະນະໃດທີ່ທ່ານຍັງບໍ່
ພໍໃຈ?.....

.....

ບໍ່ໄດ້ຈຳແນກ/ຫຼື ຂຶ້ນກັບສະຖານທີ່ຊື້ ຊ່ວຍອະທິບາຍເຫດຜົນໄດ້ບໍ?

.....

.....

2.6.ວິທີການຊື້

2.6.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຊື້?	ข ຂ້ອຍເອງ ข ຜູ້ຂາຍ
2.6.3.ລາຄາຊື້ແມ່ນມີການປ່ຽນແປງໄປຕາມລາຄາຕະຫຼາດບໍ່?	ข ແມ່ນ ข ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີການີ້ແມ່ນເທົ່າໃດ?	ສູງສຸດ:..... ສະເລ່ຍ:..... ຕ່ຳສຸດ:.....

2.7. ທ່ານສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆ (ແນວພັນ, ສິ່ງນຳເຂົ້າ, ສິນເຊື່ອ ຫຼື ອື່ນໆ) ໃຫ້ກັບຜູ້ສະໜອງບໍ່?

ข ແມ່ນ ข ບໍ່ແມ່ນ

ຖ້າມີ ແມ່ນໃນຮູບການໃດ?

.....

.....

III. ຂໍ້ມູນກ່ຽວກັບການຂາຍ

3.1. ຄວາມສາມາດໃນການຜະລິດຂອງທ່ານແມ່ນເທົ່າໃດ?

.....

IV. ຂໍ້ມູນເກັບກັບການຂາຍຜະລິດຕະພັນ

4.1. ໃນປີທີ່ຜ່ານມາ, ທ່ານໄດ້ຂາຍຜະລິດຕະພັນສຶກສາ .....ໃຫ້ລູກຄ້າປະເພດໃດແດ່?

	ປະເພດລູກຄ້າ(ແມ່ຄ້າທົ່ວໄປ, ຮ້ານອາຫານ, ຜູ້ແປຮູບອາຫານ, ທະຫານ, ອື່ນໆ	ປະລິມານຂາຍ (/ປີ)	ລາຄາຂາຍ (ຕ່ຳສຸດ-ສູງສຸດ)	ຊ່ວງເວລາຂາຍ	ຈຳນວນຄັ້ງທີ່ຂາຍຕ່ຳປີ	ປີທີ່ເລີ່ມ ຕົ້ນຂາຍ
1.	ປະເພດຜູ້ບໍລິ.....					

	ທີ່ຢູ່..... ເບີໂທ.....					
2.	ປະເພດຜູ້ບໍລິ..... ທີ່ຢູ່..... ເບີໂທ.....					
3.	ປະເພດຜູ້ບໍລິ..... ທີ່ຢູ່..... ເບີໂທ.....					
4.	ປະເພດຜູ້ບໍລິ..... ທີ່ຢູ່..... ເບີໂທ.....					
5.	ປະເພດຜູ້ບໍລິ..... ທີ່ຢູ່..... ເບີໂທ.....					

4.2.ວິທີການຂາຍ

4.2.1. ແມ່ນໃຜເປັນຄົນກຳນົດລາຄາຂາຍ?	▢ ຂ້ອຍເອງ ▢ ລູກຄ້າ
4.2.3.ລາຄາຂາຍແມ່ນມີການປຽ່ນແປງໄປຕາມລາຄາຕະຫຼາດບໍ່?	▢ ແມ່ນ ▢ ບໍ່ແມ່ນ
ຖ້າແມ່ນ, ລາຄາສູງສຸດ, ສະເຫຼ່ຍ ແລະ ຕ່ຳສຸດໃນປີການນີ້ແມ່ນເທົ່າໃດ?	ສູງສຸດ: ..... ສະເລ່ຍ: ..... ຕ່ຳສຸດ: .....

4.3. ທ່ານສະໜອງສິ່ງອຳນວຍຄວາມສະດວກຕ່າງໆໃຫ້ກັບຜູ້ບໍລິໂພກບໍ? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ

ຖ້າມີ ແມ່ນໃນຮູບການໃດ?.....

.....

V. ຕົ້ນທຶນແລະຄ່າໃຊ້ຈ່າຍໃນການຂາຍຜະລິດຕະພັນ

5.1. ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່ໃນການຊື້/ຂາຍຜະລິດຕະພັນ? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ

- ຖ້າມີ, ທ່ານມີຄ່າໃຊ້ຈ່າຍຫຍັງແດ່?

	ປະເພດຄ່າໃຊ້ຈ່າຍ	ການຊື້	ການຂາຍ
		ຕົ້ນທຶນ(ກີບ/ຖຽ້ວ)	ຕົ້ນທຶນ(ກີບ/ຖຽ້ວ)
1	ຄ່າຂົນສົ່ງ		
2	ຄ່າທຳນຽມຕ່າງໆ(ຄ່າພາສີ, ຄ່າທຳນຽມ, ອື່ນໆ)		
3	ຄ່າຕິດຕໍ່ພົວພັນ		
4	ອື່ນໆ.....		
5	ອື່ນໆ.....		

6	ອື່ນໆ.....		
7	ອື່ນໆ.....		
8	ອື່ນໆ.....		

VI. ບັນຫາໃນການຄ້າຂາຍ

6.1. ໃນລະຫວ່າງ 3 ປີ ຫຼັງ, ທ່ານເຄີຍພົບບັນຫາໃນການຊື້ຂາຍຜະລິດຕະພັນບໍ່? ▢ ແມ່ນ ▢ ບໍ່ແມ່ນ
ຖ້າມີ, ແມ່ນບັນຫາແບບໃດ.....

.....

.....

ຂໍຂອບໃຈ

XXI. Annex 2: Interviews guideline (English)

Form A

Questionnaire _Group discussion

Date.....

Name of village.....district.....
Numbers of participants.....male.....female.....

Male	**Female**
6.	1. .....
7.	2.....
8.	3.....
9.	4….....
10.	5.....

III. General information

3.1. What are the main activities of agriculture sector in your village?

no	Activities	No.HH produced	Avg.income (kip)	Maximum (kip)	Minimum (kip)
1					
2					
3					
4					
5					

3.2. What are the main of forest products that your farmers collected and created income from selling?

ລ/ດ	Forest product names	No.hh collected	Avg.income (kip)	Maximum (kip)	Minimum (kip)
1					
2					
3					
4					
5					
6					

3.3. What are the main off farm activities to created household's income ?

.....

.....

3.4. Cloud you tell us the carlendar of each product with marketing oriented ?

Products	ເດືອນ											
	1	2	3	4	5	6	7	8	9	10	11	12

3.5. Cloud you list the most priority product with the most important income within your village ? (with selected products : Cassava, cattle, pig, vegetable and boom grass)

- Priority1 : .....number of participants (HH).....
- Priority2 : .....number of participants (HH).....
- Priority3 : .....number of participants (HH).....
- Priority4 : .....number of participants (HH).....
- Priority5 : .....number of participants (HH).....

IV. Trade information

Cloud you give us the information of traders who buy the products from your village ?

10) Name .....Tel..... where he/she come from.....
11) Name .....Tel.....where he/she come from.....
12) Name .....Tel.....where he/she come from.....
13) Name .....Tel.....where he/she come from.....

4.1. In the process of selling, who determine the farm gate price, product quality, quantity, playment method/transportation ?

.....
.....
.....

4.2. What are the main promblem on trade of the selected products ? Cassava, cattle, pig, vegetable and boom grass)

.....
.....
.....
.....
.....

Thank you

Form B

Questionnaire_Producer

date.....

Questionnaire number.....
Village name.....district name.....
Name of interviewee.....Gender.....age.....

Phone number……
Type of products (case study): Cassava, cattle, pig, vegetable and boom grass

I. Household activities

1.1.what are the main activities that your household participate in?

	Production (/year)	Did you sell it?	If sell how much per year?
Paddy rice production		ขYes ขNo	
Vegetable garden production		ขYes ขNo	
Industrial crops and plantation		ขYes ขNo	
Cattle/buffalo		ขYes ขNo	
pigs		ขYes ขNo	
goat		ขYes ขNo	
poultry		ขYes ขNo	
NTFP collection		ขYes ขNo	
Off farm activity 1		ขYes ขNo	
Off farm activity 1		ขYes ขNo	
Off farm activity 1		ขYes ขNo	
Off farm activity 1		ขYes ขNo	

1.2. Please rank the main source of cash income?

1.....
2.....
3.....

II. Market and Buyer (Cassava, cattle, pig, vegetable and boom grass)

2.1. For last year, Who do you usually sell the product to?

	Buyer (name, address, phone number)	Quantity of selling (/year)	Selling price (max-min)	Period of sale	How often(time/year)
1					
2					
3					
4					
5					

III. Selling Price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

3.1. How the farm gate price is determine (method, criteria,...)?	
3.2. Who determine the farm gate price?	☐Producer ☐Buyer
3.3. Can the farm gate price change with market price evolution?	☐Yes ☐ No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

IV. Transaction cost of selected products (Cassava, cattle, pig, vegetable and boom grass)

4.1.is there any cost when you sell the product? ข yes ข no

- if yes please?

	Payment items	cost (kip/unit)		Payment items	cost (kip/unit)
1			6		
2			7		
3			8		
4			9		
5			10		

V. trust relationship between producer and buyer

5.1. Please rank your buyers in term of trust relationship?

	Name of buyer	How much do you trust the buyer?	Did you have a close relationship with the buyer?	what type of relationship?
1		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
2		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
3		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
4		ข 0 ข 1 ข2 ข 3	ขYes ขNo	

10.2. How do you know the sources of marketing information?

	Information source	Yes /No		Information source	Yes /No
1	Family		6	Trader	
2	Friend and neighbourhood		7	Television, radio	
3	Government/private sector		8	Facebook	
4	Organization…		9	WhatsApp	
5	Farmer group		10	others.....	

VI. problem on trade

6.1. Did you encounter any problems on trade**?** Yes No

If yes, please specify..... .....

.....

.....

(Thank You)

Questionnaire_Collector

Form C

date.....

Questionnaire number.....
Village name.....district name.....
Name of interviewee.....Gender.....age.....
Phone number……
Type of products (case study): Cassava, cattle, pig, vegetable and boom grass

I. Main Activities of Actors

1.1. What are the three main activities that you participate in?

	Activity	Year of started		Activity	Year of started
1			4		
2			5		
3			6		

II. Source of supply for studied products (Cassava, cattle, pig, vegetables, broom grass)

2.1. Where and whom do you usually buy the product?

	Suppliers (name, address, phone number)	Quantity of buy (/year)	Price of buy (min – max)	Period/frequency of buy	How long do you buy the product from them?

2.2 Please rank your suppliers in term of trust relationship?

	Name of supplier	How much do you trust the buyer?	Did you have a close relationship with the supplier?	what type of relationship?
1		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
2		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
3		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
4		ข 0 ข 1 ข2 ข 3	ขYes ขNo	

2.3. did you provide inputs or credits to the supplier? 1. yes 2. no

If yes, please specific?.....
.....
.....

2.4. when you buy the products, what are the main criteria for the product quality?

.....
.....
.....

2.5. Is the quality of collected products response to the required quality? 1. Yes 2. No ?

If no, please specific?.....
.....
.....

2.6. Buying price mechanism

Buying price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

How the farm gate price is determine (method, criteria,...)?	

Who determine the farm gate price?	☐Producer ☐Buyer
Can the farm gate price change with market price evolution?	☐Yes ☐ No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

III. Market and Buyer (Cassava, cattle, pig, vegetable and broom grass)

3.1 For last year, Who do you usually sell the product to?

	customers (name, address, phone number)	Quantity of selling (/year)	Selling price (max-min)	Period of sale	How often(time/year)
1					
2					
3					
4					
5					

3.2 did you provide inputs or credits to your customers ? 1. yes 2. no

If yes, please specific?.....

.....

.....

3.3. when you sell the products, what are the main criteria for the product quality?

.....

.....

.....

3.4 selling price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

How the price is determine (method, criteria,...)?	
Who determine the price?	☐yourself ☐ customer
Can the price change with market price evolution?	☐Yes ☐ No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

IV. cost of buying and selling

	Activities	buy	sell
		Cost (kip/time)	Cost (kip/time)
1			
2			
3			
4			
5			

V. problem on trade

5.1. Did you encounter any problems on trade**?** Yes No

If yes, please specify..... .....

....

Thank You

Questionnaire_Processor

Form D

date.....

Questionnaire number.....
Village name.....district name.....
Name of interviewee.....Gender.....age.....

Phone number……
Type of products (case study): Cassava, cattle, pig, vegetable and boom grass

I. Main Activities of Actors

1.1. What are the three main activities that you participate in?

	Activity	Year of started		Activity	Year of started
1			4		
2			5		
3			6		

II. Source of supply for studied products (Cassava, cattle, pig, vegetables, broom grass)

2.1. Where and whom do you usually buy the product for processing?

	Suppliers (name, address, phone number)	Quantity of buy (/year)	Price of buy (min – max)	Period/frequency of buy	How long do you buy the product from them?

2.2 Please rank your suppliers in term of trust relationship?

	Name of supplier	How much do you trust the buyer?	Did you have a close relationship with the supplier?	what type of relationship?
1		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
2		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
3		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
4		ข 0 ข 1 ข2 ข 3	ขYes ขNo	

2.3 did you provide inputs or credits to your suppliers? 1. yes 2. no

If yes, please specific?.....
.....
.....

2.4. when you buy the products, what are the main criteria for the product quality?

.....
.....

III Buying price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

How the price is determine (method, criteria,...)?	
Who determine the price?	☐yourself ☐ customer
Can the price change with market price evolution?	☐Yes ☐ No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: .....

	Average: .....

III. Processing and trading

3.1. what is capacity of processing (unit/day/month/year)?

.....

3.2 What kind of by-products that you have after the processing?

	Types of products	% or Kg	Sell/No	price?
1				
2				
3				
4				

IV. Selling Information after processing

4.1. Where and to whom do you usually sell the product? After processing

	Type of customers (local consumer, restaurant, ….)	Quantity of selling (/year)	Selling price (max-min)	Period of sale	How often(time/year)
1					
2					
3					
4					
5					

4.2 selling price mechanism

How the price is determine (method, criteria,...)?	
Who determine the price?	☐ yourself ☐ customer
Can the price change with market price evolution?	☐ Yes ☐ No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

V. Cost of buying, processing and selling

	Activities	buy	sell
		Cost (kip/time)	Cost (kip/time)
1			
2			
3			
4			
5			

VI. problem on trade

6.1. Did you encounter any problems on trade**?** Yes No

If yes, please specify..... .....

....

.....

(Thank You)

Questionnaire_wholesaler/retailer

Form E

date.....

Questionnaire number.....
Village name.....district name.....
Name of interviewee.....Gender.....age.....

Phone number……
Type of products (case study): Cassava, cattle, pig, vegetable and boom grass

I. Main Activities of Actors

1.1. What are the three main activities that you participate in?

	Activity	Year of started		Activity	Year of started
1			4		
2			5		
3			6		

II. Source of supply for studied products (Cassava, cattle, pig, vegetables, broom grass)

2.1. Where and whom do you usually buy the product?

	Suppliers (name, address, phone number)	Quantity of buy (/year)	Price of buy (min – max)	Period/frequency of buy	How long do you buy the product from them?

2.2 Please rank your suppliers in term of trust relationship?

	Name of supplier	How much do you trust the buyer?	Did you have a close relationship with the supplier?	what type of relationship?
1		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
2		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
3		ข 0 ข 1 ข2 ข 3	ขYes ขNo	
4		ข 0 ข 1 ข2 ข 3	ขYes ขNo	

2.3. did you provide inputs or credits to the supplier? 1. yes 2. no

If yes, please specific?.....
.....
.....

2.4. when you buy the products, what are the main criteria for the product quality?

.....
.....
.....

2.5. Is the quality of collected products response to the required quality? 1. Yes 2. No ?

If no, please specific?.....
.....
.....

2.6. Buying price mechanism

Buying price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

How the farm gate price is determine (method, criteria,...)?	
Who determine the farm gate price?	ข Producer ข Buyer
Can the farm gate price change with market price evolution?	ข Yes ข No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

III. Market and Buyer (Cassava, cattle, pig, vegetable and boom grass)

3.1 For last year, Who do you usually sell the product to?

	customers (name, address, phone number)	Quantity of selling (/year)	Selling price (max-min)	Period of sale	How often(time/year)
1					
2					
3					
4					
5					

3.2 did you provide inputs or credits to your customers ? 1. yes 2. no

If yes, please specific?.....

.....

3.3. when you sell the products, what are the main criteria for the product quality?

.....

.....

3.4 selling price mechanism of selected products (Cassava, cattle, pig, vegetable and boom grass)

How the price is determine (method, criteria,...)?	
Who determine the price?	ข yourself ข customer
Can the price change with market price evolution?	ข Yes ข No
If yes, please give the minimum, maximum and average price	Minimum: ..... Maximum: ..... Average: .....

IV. cost of buying and selling

	Activities	buy	sell
		Cost (kip/time)	Cost (kip/time)
1			
2			
3			
4			
5			

V. problem on trade

5.1. Did you encounter any problems on trade**?** Yes No

If yes, please specify..... .....

....

Thank You

IWRM-EbA Project

Project Management Unit

Department of Water and Resources (DWR)

Ministry of Agriculture and Environment (MAE)

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