



LIVELIHOODS AND VALUE-CHAINS OF NON-TIMBER FOREST AND ENVIRONMENTAL PRODUCTS

FOR-248 Tropical forests and agroforests

Field course 2023

Group 4

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Introduction to value chains

- In LAO PDR, almost all local people need natural product to support their livelihood for example, Land to farm, Timbers, Foods, Medicine, Income.
- In this field course, group 4 has interviewed local people who are representative in three villages (Vieng Hinh Soung, Nayang Tai and Bom)
- Value chains are an integral part of strategic planning for many businesses today. A value chain refers to the full life cycle of a product or process, including material sourcing, production, consumption and disposal/recycling processes. [Source: WBCSD \(2011\)](#)

Non-timber forest products (NTFPs)

- Main use of NTFP's is for subsistence and cash.
- Bamboo-shoots, fish, vegetables, wildlife are considered by local people as the most important products from the forest.
- Women tend to collect more plant food products, men more animal product. (Foppes, J., & Ketphanh, S, 1997)





NTFPs for income and subsistence



- Non-Timber Forest Products (NTFPs) provide 50% of cash income of rural villages, where 80% of the Lao population lives.
- Local subsistence use of NTFPs may account for 20–30% of the Gross National Product (Foppes & Ketphanh, 2000)

Objectives

1. Objective

- Define the main forest and environmental products used by households in each village.
- Define the main on-farm and off-farm income sources of households in each village.

2. Objective

- Establish the value chain map of the main product in each village.
- Identify the main actors of the value chains.
- Identify the price development along the value chains.
- Identify threats and opportunities of the value chains.

STUDY DESIGN AND METHODS

A photograph of a research team in a rural village. In the foreground, a man in a white shirt and cap is crouching and writing in a notebook. To his left, a woman in a pink sweater and a man in a blue shirt are also crouching, looking at papers. In the background, there are traditional houses with tiled roofs, laundry hanging on a line, and mountains in the distance. The text 'STUDY DESIGN AND METHODS' is overlaid in large white letters.

Study area

- **Nambak District** in Luang Prabang Province
 - Located in mountainous and forested northern part of the country.
 - Population is around 60,00 people (Lao Statistics Bureau, 2016).
 - Different ethnic groups (Lao Statistics Bureau, 2016).
- Three villages, different distance from Nambak center
 - **Ban Vieng Hinh Soung** - furthest
 - **Ban Nayang Tai** - middle
 - **Ban Bom** - closest



Primary data collection

1. Household surveys – household level data

- Randomly selected households
- Structured questions and semi-structured open-ended questions
- Household's on-farm and off-farm income in the past 12 months

2. Focus group discussions – village level data

- Snowball sampling
- Main products for subsistence and cash
- 3 female and 3 male focus group discussions (2 in each village)



Primary data collection

3. Key informant interviews — individual level data

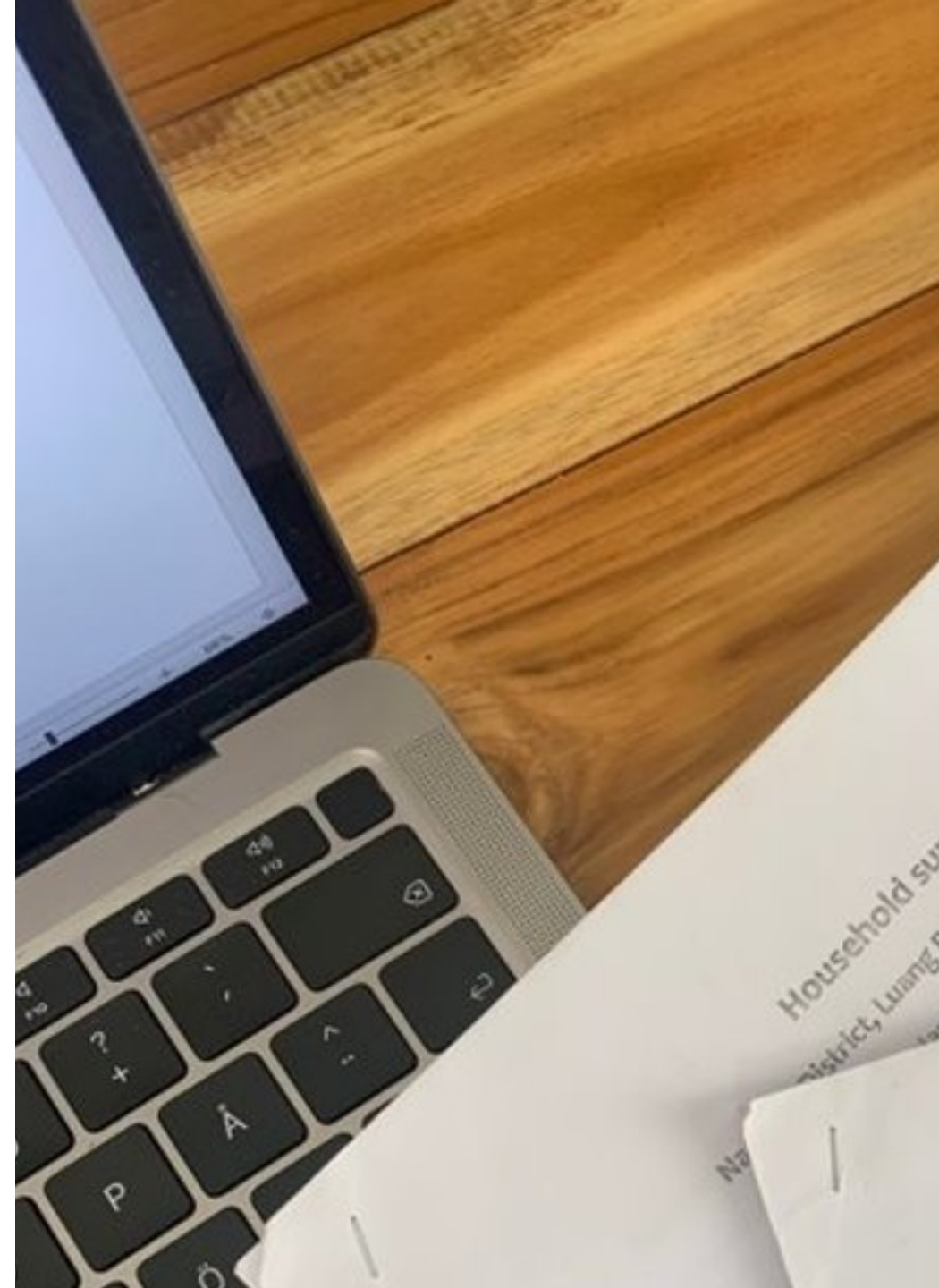
- Interviewees were selected
- Semi-structured open-ended questions
- Questions about selected main products
- 3 key informant interviews (1 in each village)
 1. Orchids middleman in Vieng Hinh Soung
 2. Handicraft worker in Nayang Tai
 3. Riverweed processing factory worker in Bom

4. Participatory map and transect walks — village level data



Analyses

- The analyses were done separately for each villages.
- Data from **focus group discussions**
 - Descriptive analyses from 6 focus group discussions
- Data from **household surveys**
 - Descriptive analyses from 29 household surveys
- Data from **key informant interviews**
 - Value-chain analysis for 3 products



Ethical considerations

- **Data collection**

- The collection methods were not invasive.
- The participation was voluntary, only snacks were provided for the participants.
- The purpose of the data collection was explained, and consent was asked.

- **Data analyses and management**

- The data is handled anonymously.
- Only the field course students and organizers can access it.
- Data used only for course purposes.



RESULTS

A scenic landscape featuring a river flowing through a lush, green valley. The river is surrounded by dense tropical vegetation, including palm trees and banana plants. In the background, there are rolling hills and mountains under a clear blue sky. The word "RESULTS" is overlaid in large, white, bold letters across the center of the image.

Focus group results: main products used and income on-farm at village level

- Similar information provided by women's and men's groups

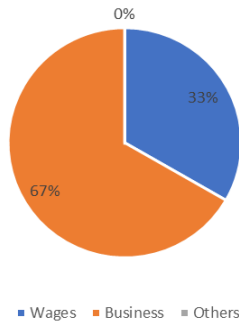
Vieng Hinh Soung	Subsistence	Cash
Crop	Rice	Job's tears
Livestock	Poultry	Cow
Timber	Kardang	-
NTFPs	-	Orchid, Broom grass, Malabar
Others	Firewood	-

Nayang Tai	Subsistence	Cash
Crop	Rice	Tabacco
Livestock	Poultry	Cow
Timber	Kradang	-
NTFPs	Bamboo	-
Others	Firewood	Rubber

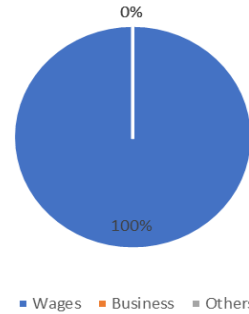
Bom	Subsistence	Cash
Crop	Rice	Orange
Livestock	Poultry	Cow
Timber	-	-
NTFPs	Bamboo	Bamboo
Others	Firewood	Riverweed

Focus group results: income sources off-farm at village level

Vieng Hinh Soung - Men's group

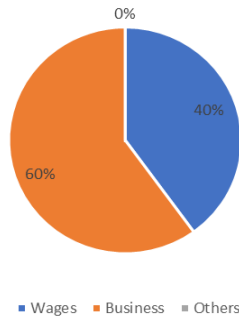


Vieng Hinh Soung - Women's group

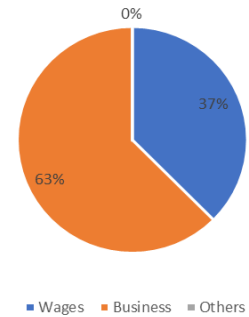


Wages: Rubber Plantation
Business: Middle-men

Nayang Tai - Men's group

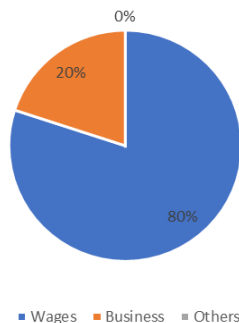


Nayang Tai - Women's group

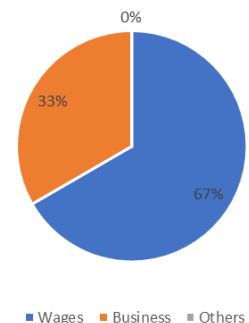


Wages: Farm labour
Business: Handicraft

Bom - Men's group

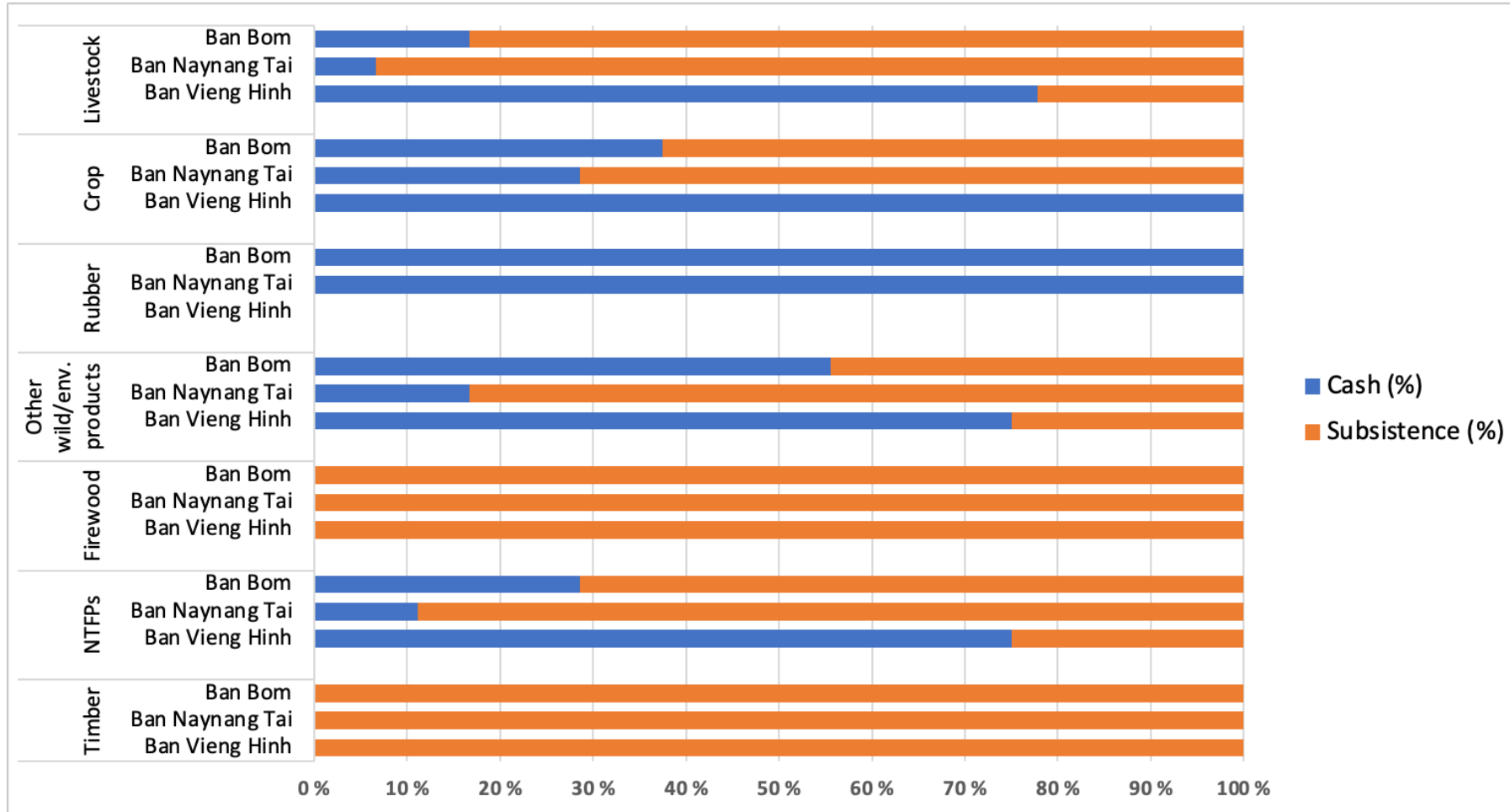


Bom - Women's group



Wages: Riverweed, Shops, Government official
Business: Middle-men, Riverweed

Household results: The most important products for cash and subsistence

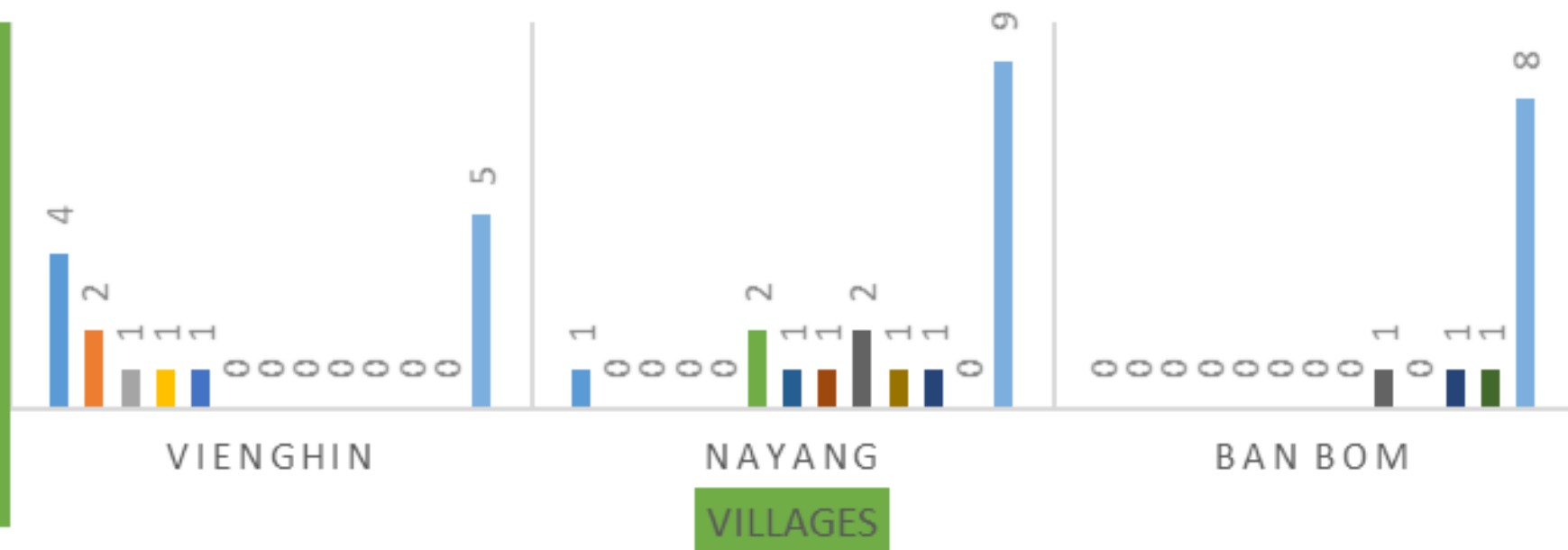


- **Cash:** more livestock, crop, NTFPs and other wild/env. products in Vieng Hinh & rubber only in Nayang Tai and Bom
- **Subsistence:** timber and firewood in all villages & more livestock, crop, NTFPs and other wild/env- products in Nayang Tai and Bom

TIMBER USED IN LAST 12 MONTHS

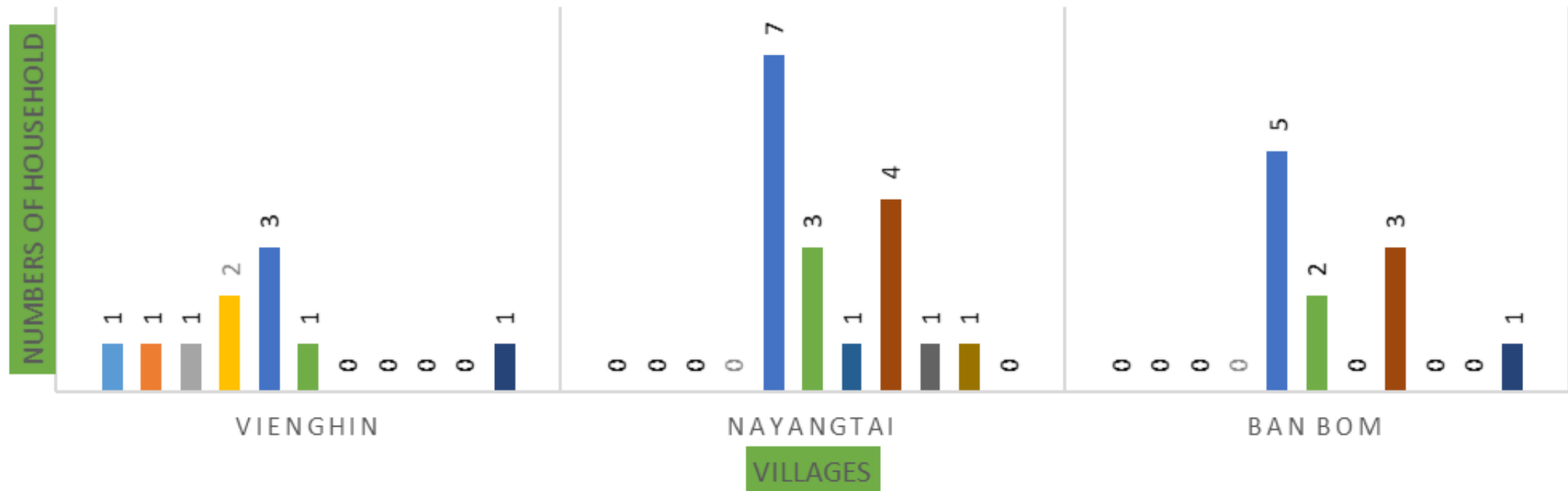
KaDang MaiMen Kore MaiTen MaiMon
 Bamboo Tong Yom Tect Kebar
 MaiKa Tongbong Don't

NUMBERS OF HOUSEHOLD

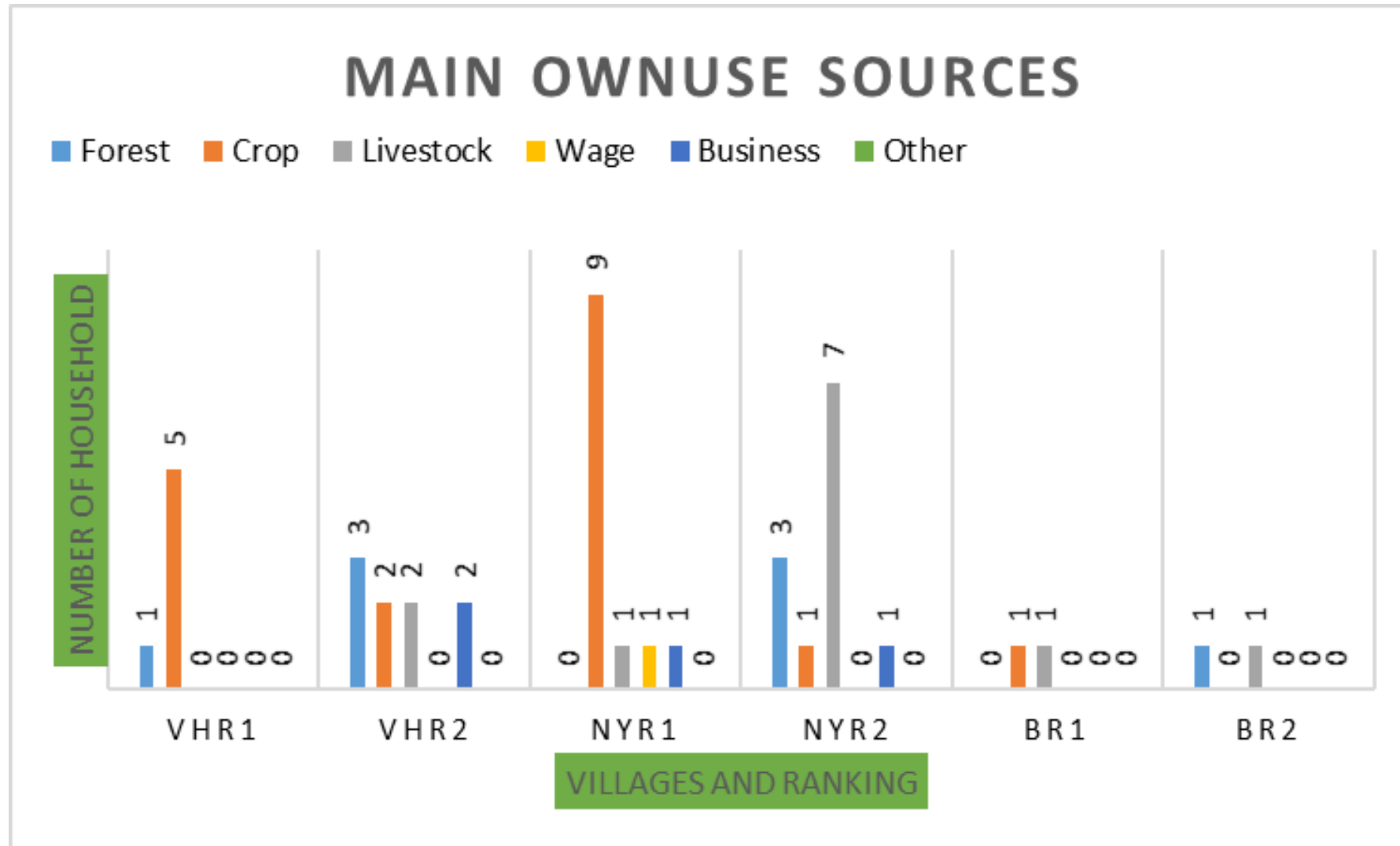


MAIN NTFP OF THREE VILLAGES

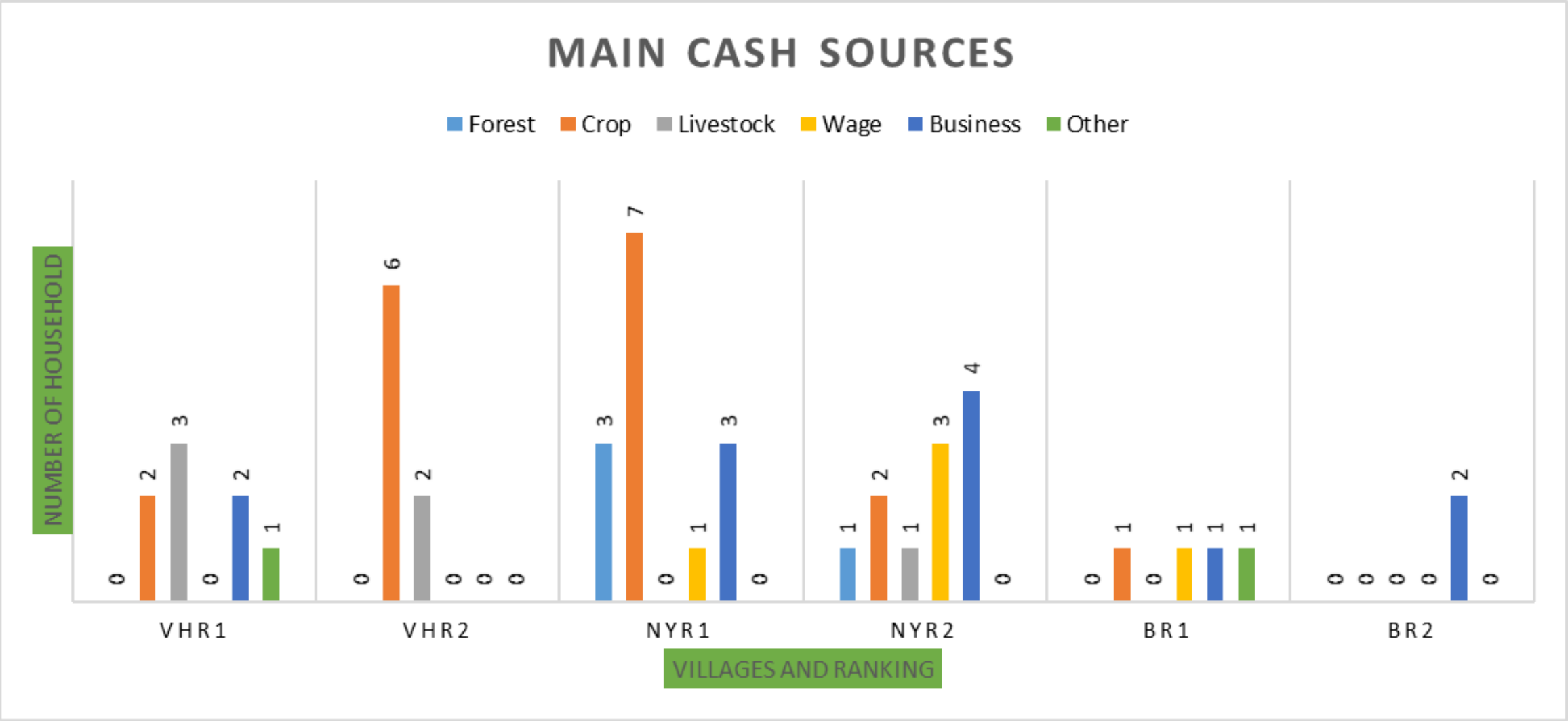
■ Bloomgrass ■ Malabar ■ Ochid ■ Konjak ■ Bamboo shoot ■ Wild Vegetable
■ MhakPao ■ Mushroom ■ Bamboo pole ■ Kok Kham Krua ■ Bamboo worm



Ranking of main own use sources 1/2

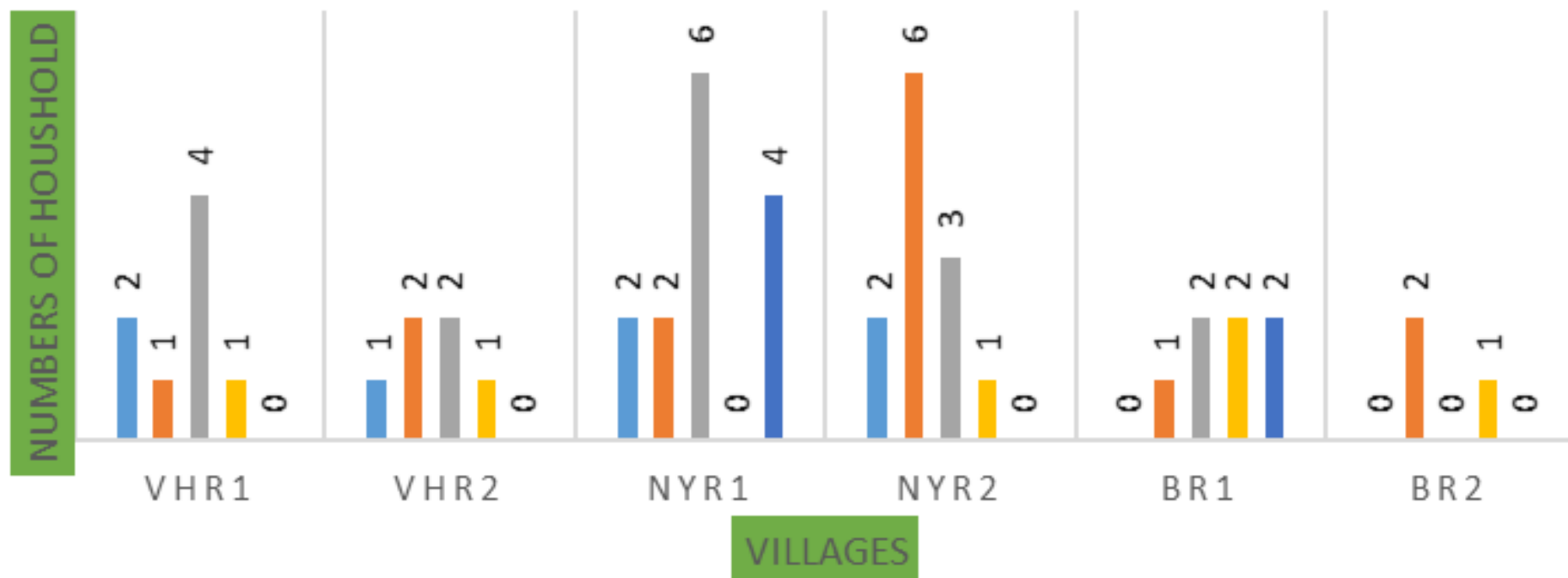


Ranking of main cash sources 2/2

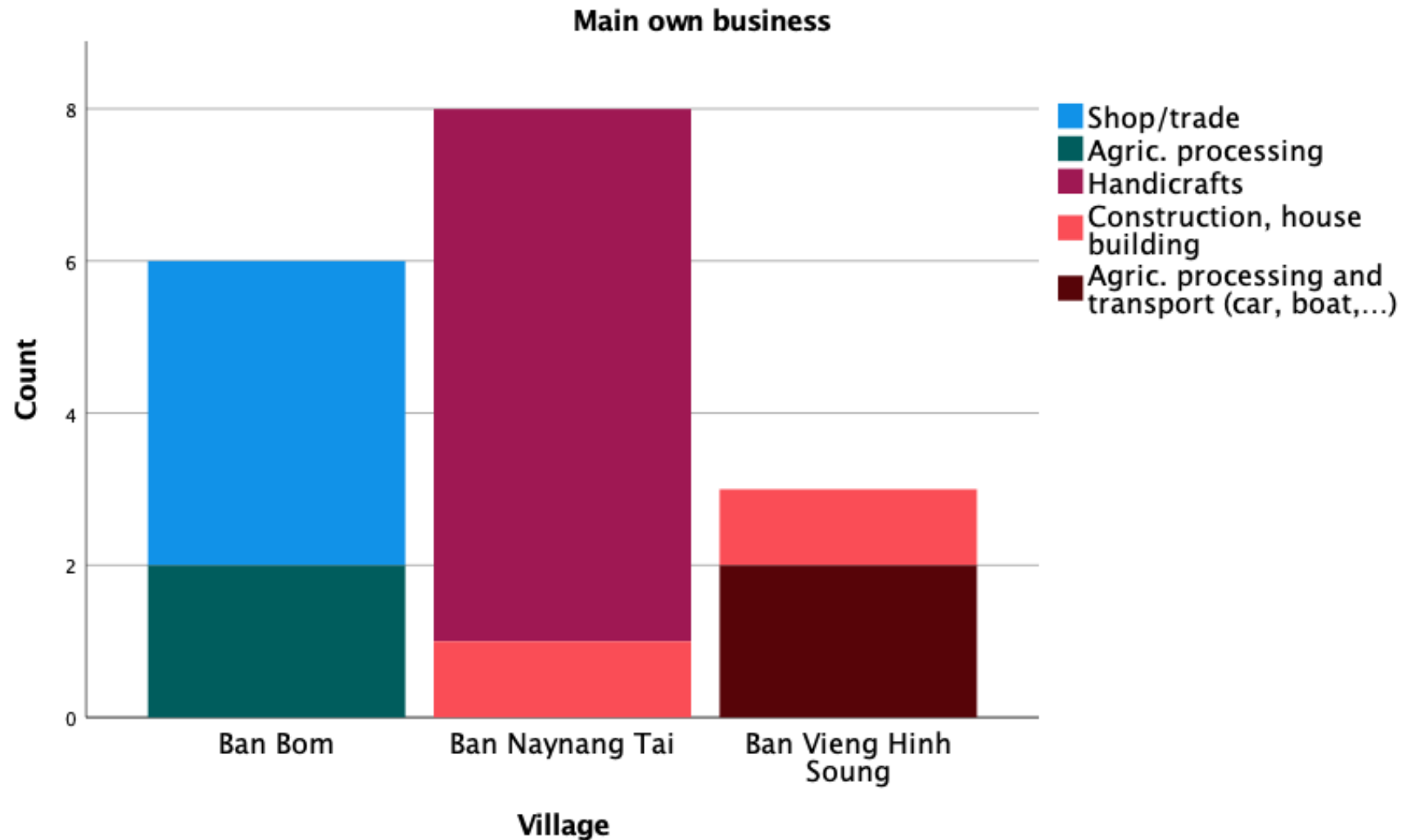



MAIN IMPORTANT RANKING OF THREE VILLAGES

■ Timber ■ NTFP ■ Fire wood ■ Other ■ Rubber



Main own business





VALUE-CHAINS

Orchids in Vieng Hinh Soung
Handicrafts in Nayang Tai
Riverweed in Bom

Value chains of Orchid - Vieng Hinh Soung

Introduction

- **Orchids are collected from the Conservation forests**
 - Everyone in the village can collect
 - Collecting period in December – May
 - 1 person can collect 30 kg / day
 - Last five years have seen a significant decline in the number of orchids.
- **After collection, orchids are dried**
- **Dried orchids are sold - possibly used as medicine**



Value chains of Orchid - Vieng Hinh Soung

Main actors of the value chains

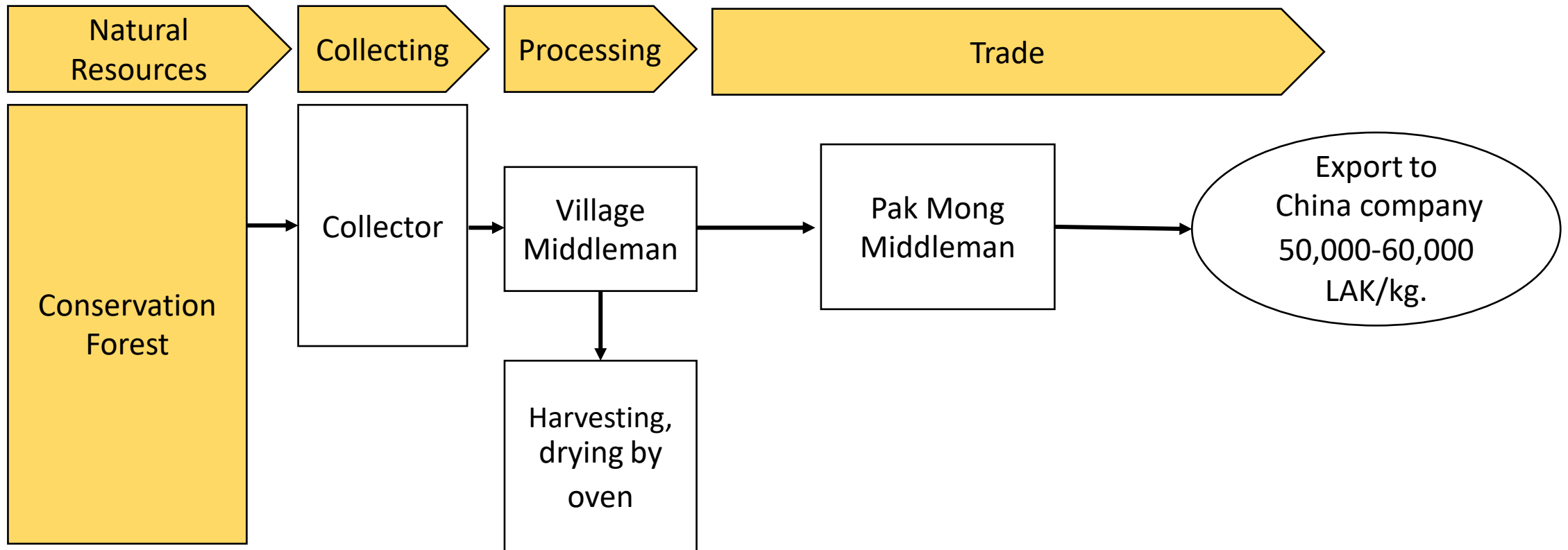
- **Collectors** get information about species, price and amounts from village middlemen.
- **Village middlemen** gets information from **trader**.
- Collector and village middlemen do not clearly know about final products and **markets**.
- Trader and Chinese middlemen do not share detailed information about **final markets**.

Orchids price distribution

- Interviewed middleman knew only about his purchases and sold prices below.
- No extensive price distribution available.

Collectors and processors (Middleman buys)	Middleman sells	Middleman total annual income from all NTFPs
7,000 LAK / kg	60,000 LAK / kg (dry orchid)	15,000,000 LAK

Orchids value-chain from Vieng Hinh Soung village



Orchids



Harvesting



drying by oven



Value chains of handicrafts – Nayang Tai

Introduction

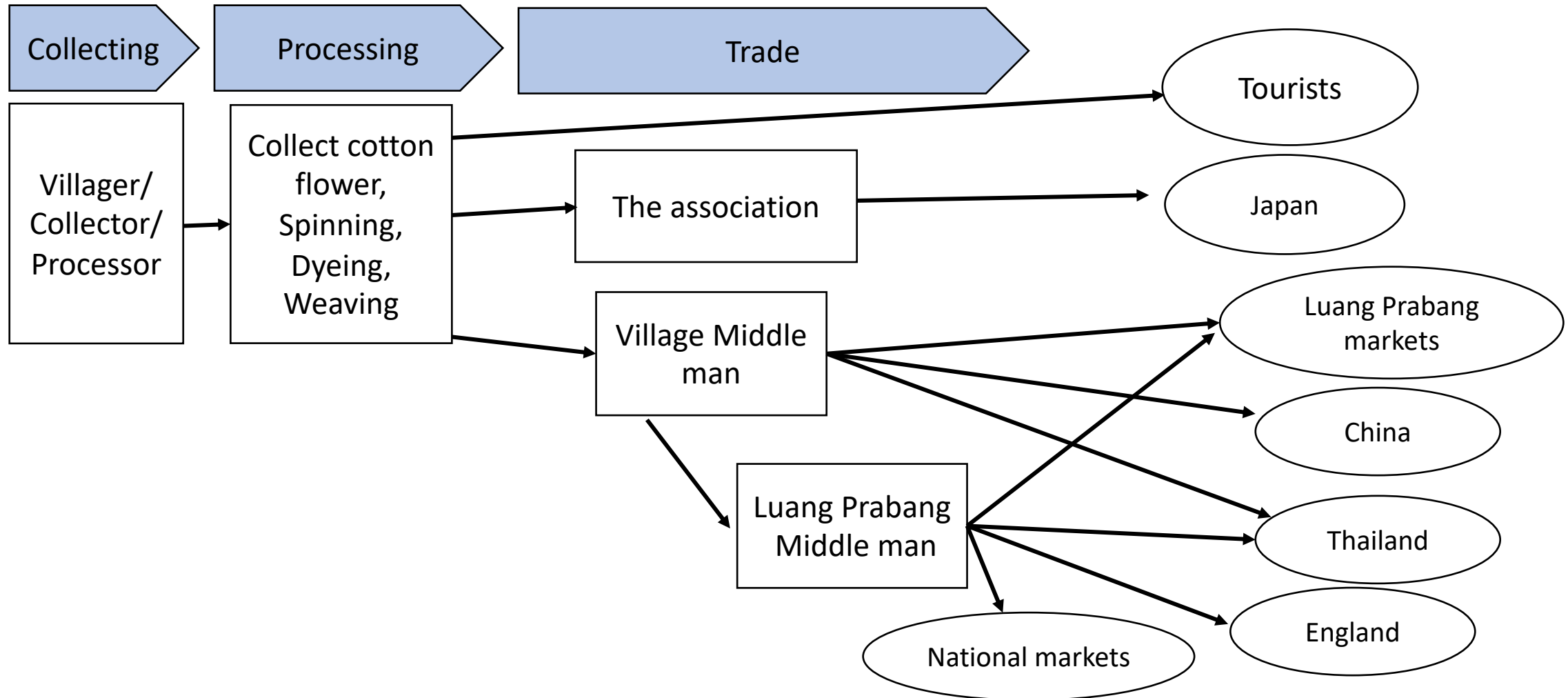
- 6 years ago, Japanese (Japan International Cooperation Agency (JICA)) started a development program for handicrafts (spinning, dyeing and weaving) with natural resources.
- Japanese provided money to households to buy new material to produce handicrafts.

Main actors of the value chains

- Handicraft households (112)
- Middle-men
- Handicrafts Association (40)
- Japanese (JICA)
- Tourists



Handicraft value-chain from Na yang tai village



Dyeing Process



Collect cotton flower



Spinning



Drying



Dyeing



Weaving Process



Drying



spin the cotton
thread into the spool



woven fabric

weaving

Prepare cotton threads are long enough
for the size of fabric you want to weave.

Value chains of handicrafts – Nayang Tai

Japanese (JICA):

- The price changes according to the color and the quality of the cotton.

Price [kips/year]	Cost [kips/year]	Benefit [kips/year]
3 000 0000	1 5000 000	1 500 000

Middle-men:

Price [kips/year]	Cost [kips/year]	Benefit [kips/year]
100 000 000	60 000 000	40 000 000

Tourists:

Price [kips/pce]	Cost [kips/pce]	Benefit [kips/pce]
50 000	40 000	10 000

Value chains of handicrafts – Nayang Tai

Weakness

- Dependence to one buyer
- Strong position of the middle-men
- Access road in bad condition
- Identical handicraft design

Threat

- Decline in cotton availability
- Decline in natural product used for dyeing

Strength

- Beautiful and authentic surrounding
- Hospitality

Opportunity

- Increase the power of the association
- Tourism development
- Find more buyer
- Training on new designs and new techniques

Value chains of riverweeds – Ban Bom

- **Introduction**

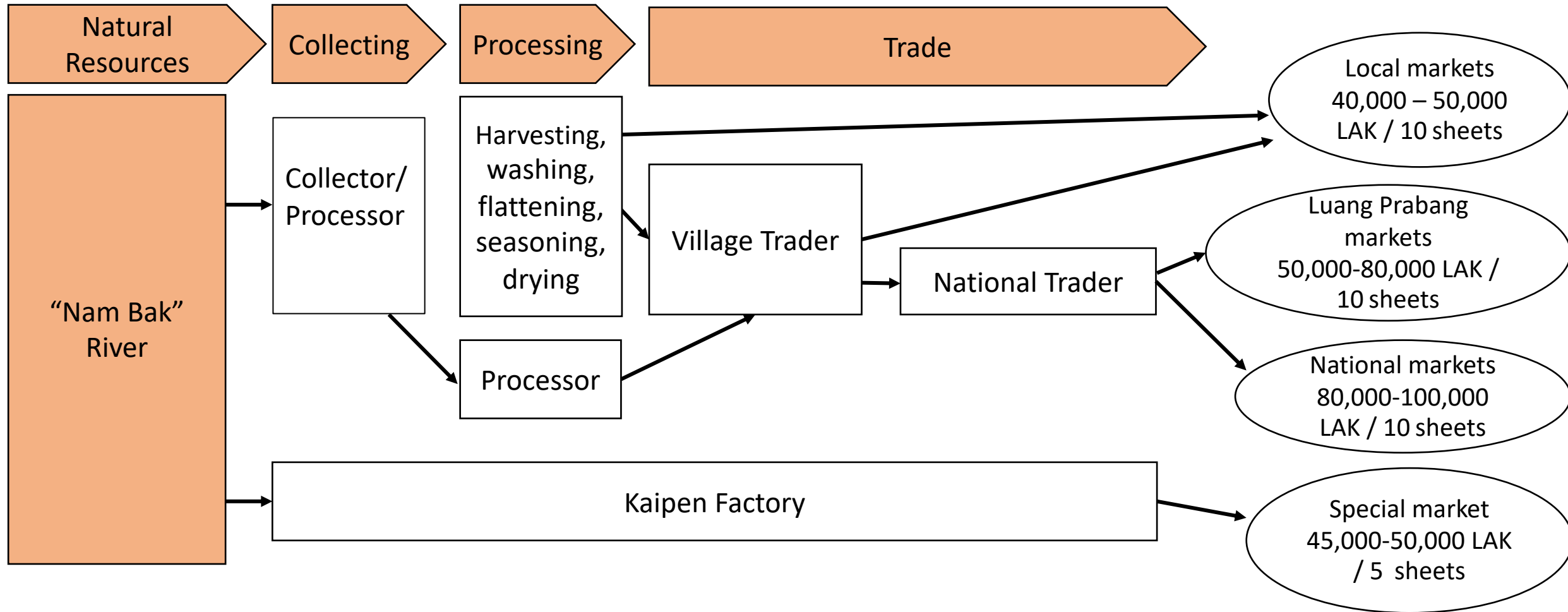
- Riverweed is collected from the Nambak river and processed into edible snacks
- Processing factory in Ban Bom
 - The factory is supported by Korean-funded project (started 15-20 years ago)

- **Main actors of the value chains**

- Riverweed collectors and pre-processors
- Processors in the factory
- Village traders
- National traders
- Consumers



Kaipen (River weed) value-chain from Ban Bom village



Kaipen Process



Harvesting



washing



chopped



flattening



dehydrate



Kaipen Process



seasoning



drying



Shop in village



Village middleman



Kaipen company



Luang Prabang markets

Value chains of riverweeds – income in Ban Bom

Riverweed collectors	Processing factory	Local markets	Luang Prabang markets	National Markets	Special markets
8,000-15,000 LAK / kg depending on the quality and cleaning	45,000 LAK / package, 45,000,000 LAK / month	40,000 – 50,000 LAK / 10 sheets	50,000-80,000 LAK / 10 sheets	80,000-100,000 LAK / 10 sheets	45,000-50,000 LAK / 5 sheets

Income challenges

- **Collectors**
 - Income depends on the quality of the riverweeds and amount of collection
- **Processing factory**
 - Does not pay for the people working in the factory -> the workers income depends on the amount of sold kaipen, which is divided equally within the workers about weekly

Value chains of riverweeds – Ban Bom

Threats

- **Seasonal product**
 - can be harvested only in dry season when the river water is low and no sediment and low temperature
- Riverweed **amount decreasing** because of the dams, may affect the income of the local people
- **Only livelihood strategy** for the workers

Opportunities

- **Growing demand for products**, price may increase
- **Collaboration and support** from Souphanavong University and Korea



A group of people are gathered in a room with a wall covered in numerous framed certificates. In the foreground, a man in a white t-shirt is leaning over a wooden table, drawing a large, irregular shape on a sheet of paper. He is holding a blue marker. To his right, a man in a grey t-shirt and jeans is looking down at the drawing, holding a camera. Behind them, a woman in a light-colored shirt is holding a blue clipboard. To the right, a man in a blue jacket and a man in a white shirt are looking at the drawing. In the far right, a man in a green and brown camouflage shirt is looking towards the group. The room has a wooden lattice wall and a blue curtain on the left.

DISCUSSION

Discussion: village level

- The three villages rely on the same products for subsistence.
- On-farm income, the villages relied on different products except for livestock.
- Vieng Hinh Soung is the only village relying on NTFPs.
- Off-farm income, less remote is the villages more people appears to rely on wages.

Discussion: household level

Vieng Hinh Soung

- Households are mainly depending on forest products, NTFPs, Crop and Livestock for income and subsistence -> remote location of the village

Nayang Tai

- Main income is rubber, crop and handicraft -> foreigner countries influences

Ban Bom

- Main income is business and river weed products -> located on the main road

Village differences

- Households living in the most remotes villages are relying mainly on crops for subsistence and cash, whereas households in Bom village is less dependent on crops.
- The location of the villages influence the livelihoods of the households in term of income.
- In Nayang Tai, the influence of foreigner countries on household income can be observed.

Conclusions

- There are livelihood and income differences between the villages
- They rely on different products
- External drivers such as location and market demand are defining the livelihoods of the villages
- Main NTFPs and other products are declining in different villages -> sustainable production and management are important in the future



THANK YOU!

References

Lao Statistics Bureau (2016). Results of Population and Housing Census 2015. Available at: <https://lao.unfpa.org/en/publications/results-population-and-housing-census-2015-english-version> [Accessed April 7, 2022].