

A tropical landscape featuring a river in the foreground, lush greenery, palm trees, and mountains in the background under a clear blue sky. The text is overlaid on the center of the image.

# **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

# 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

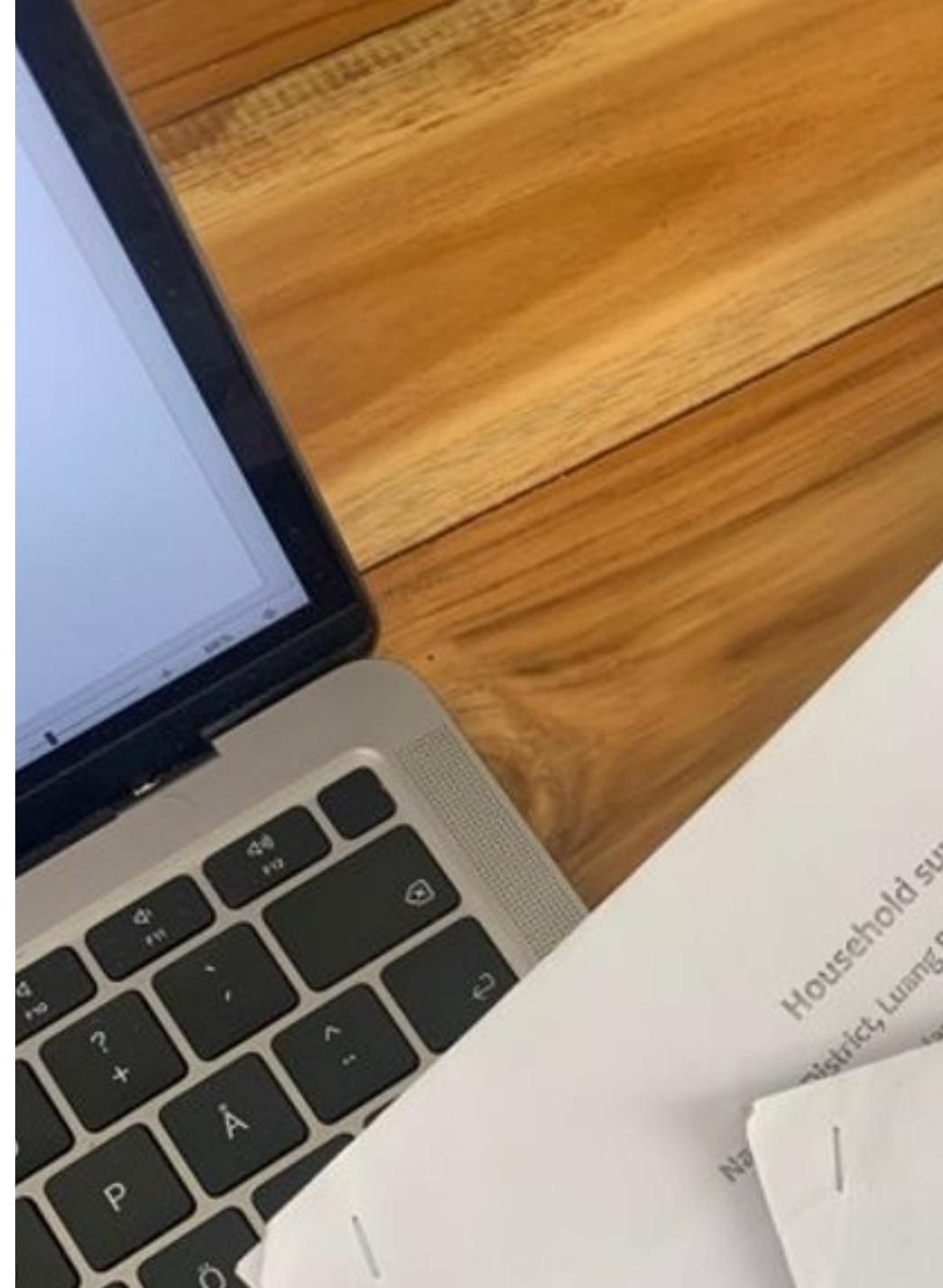
- Interviewees were selected
- Semi-structured open-ended questions
- Questions about selected main products
- 3 key informant interviews (1 in each village)
  1. Orchids middleman in Vieng Hinh Soung
  2. Handicraft worker in Nayang Tai
  3. Riverweed processing factory worker in Bom

## 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

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

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

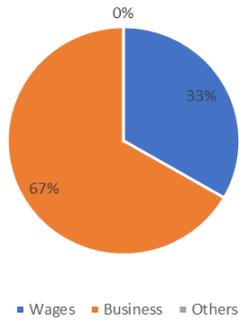
Vieng Hinh Soung	Subsistence	Cash
Crop	Rice	Job's tears
Livestock	Poultry	Cow
Timber	Kardang	-
NTFPs	-	Orchid, Broom grass, Malabar
Others	Firewood	-

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

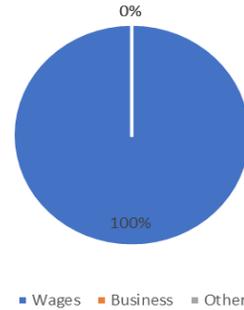
Bom	Subsistence	Cash
Crop	Rice	Orange
Livestock	Poultry	Cow
Timber	-	-
NTFPs	Bamboo	Bamboo
Others	Firewood	Riverweed

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

Vieng Hinh Soung - Men's group

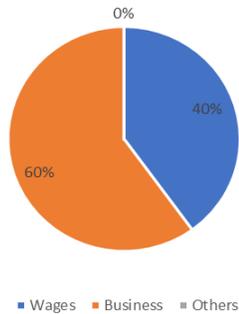


Vieng Hinh Soung - Women's group

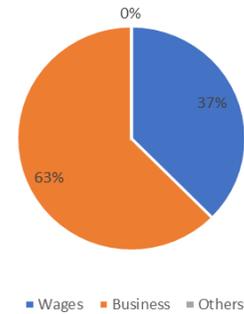


**Wages:** Rubber Plantation  
**Business:** Middle-men

Nayang Tai - Men's group

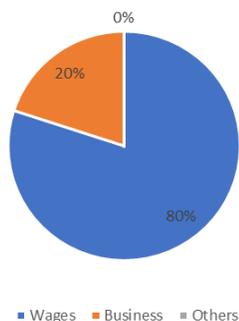


Nayang Tai - Women's group

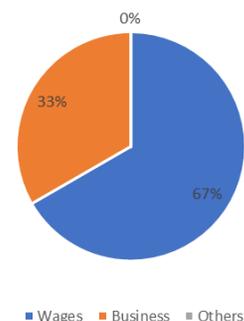


**Wages:** Farm labour  
**Business:** Handicraft

Bom - Men's group

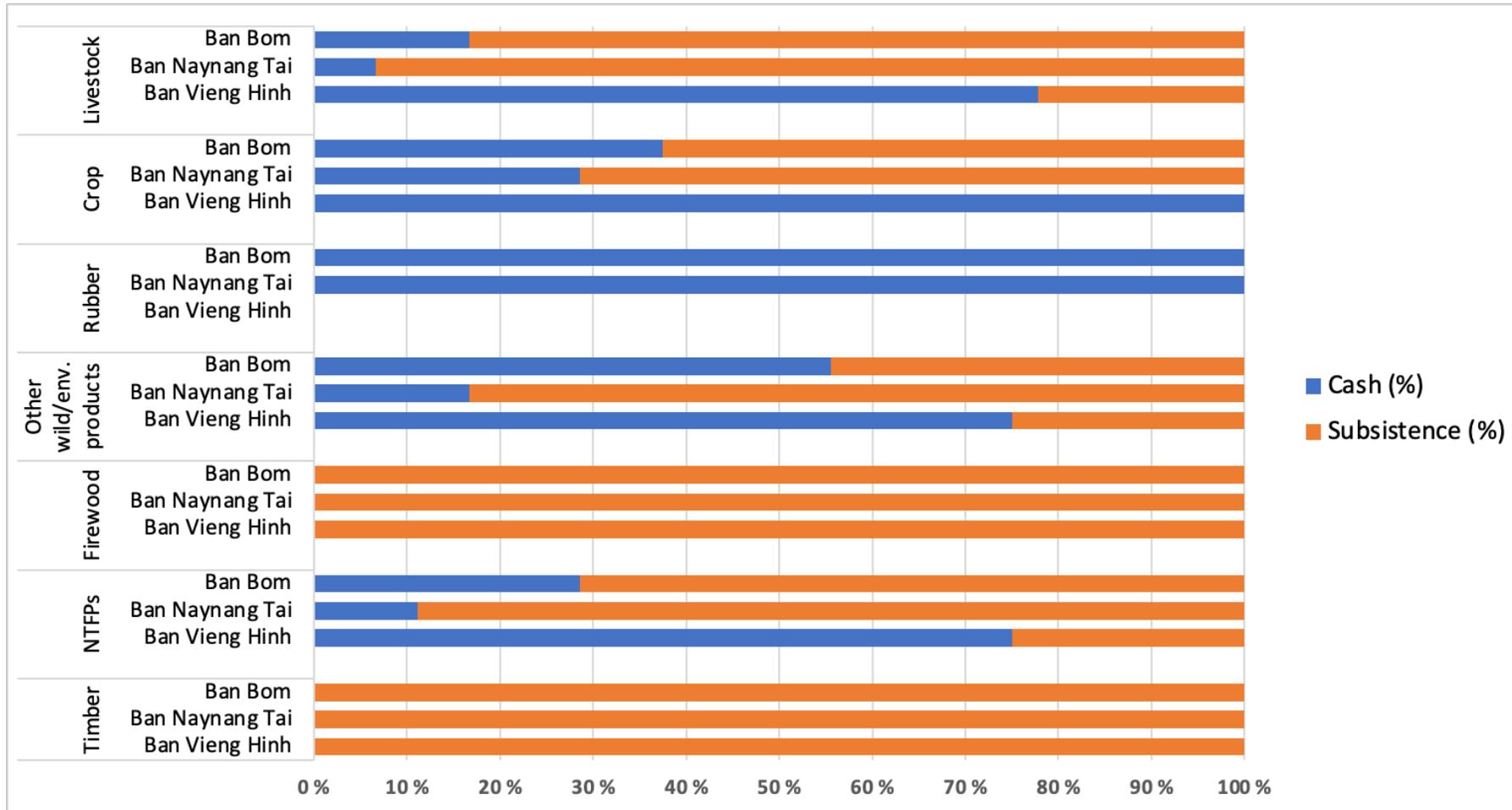


Bom - Women's group



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

# Household results: The most important products for cash and subsistence

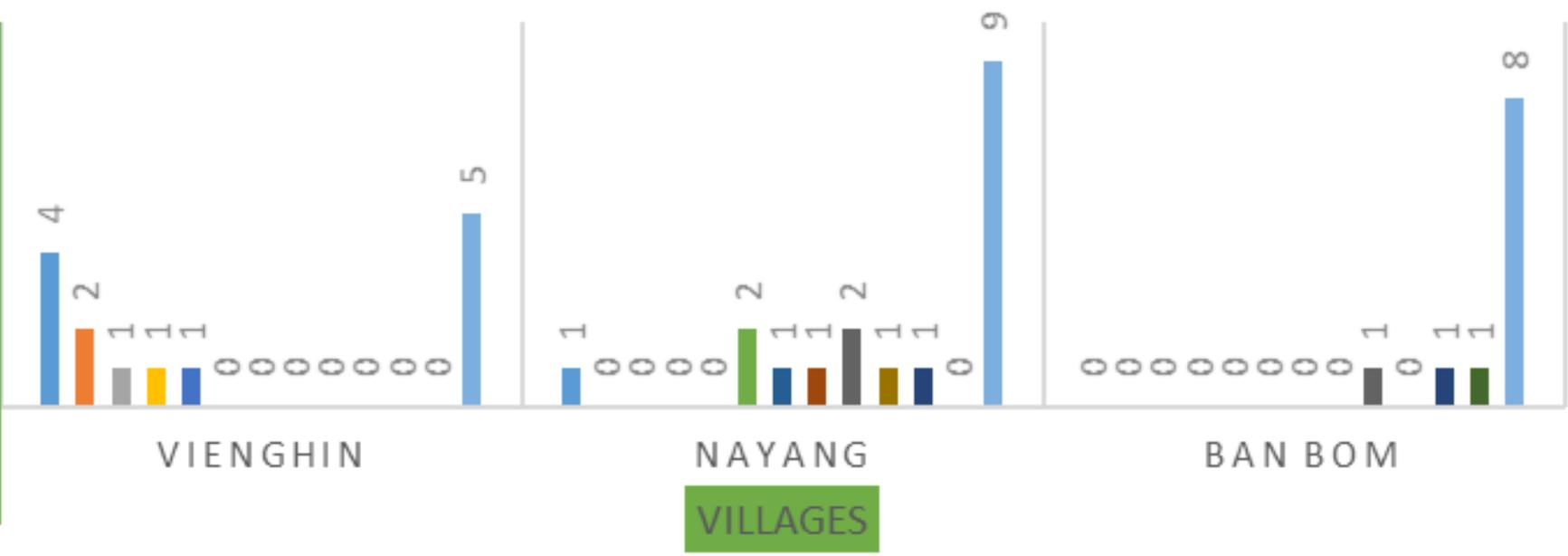


- **Cash:** more livestock, crop, NTFPs and other wild/env. products in Vieng Hinh & rubber only in Nayang Tai and Bom
- **Subsistence:** timber and firewood in all villages & more livestock, crop, NTFPs and other wild/env- products in Nayang Tai and Bom

# TIMBER USED IN LAST 12 MONTHS

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

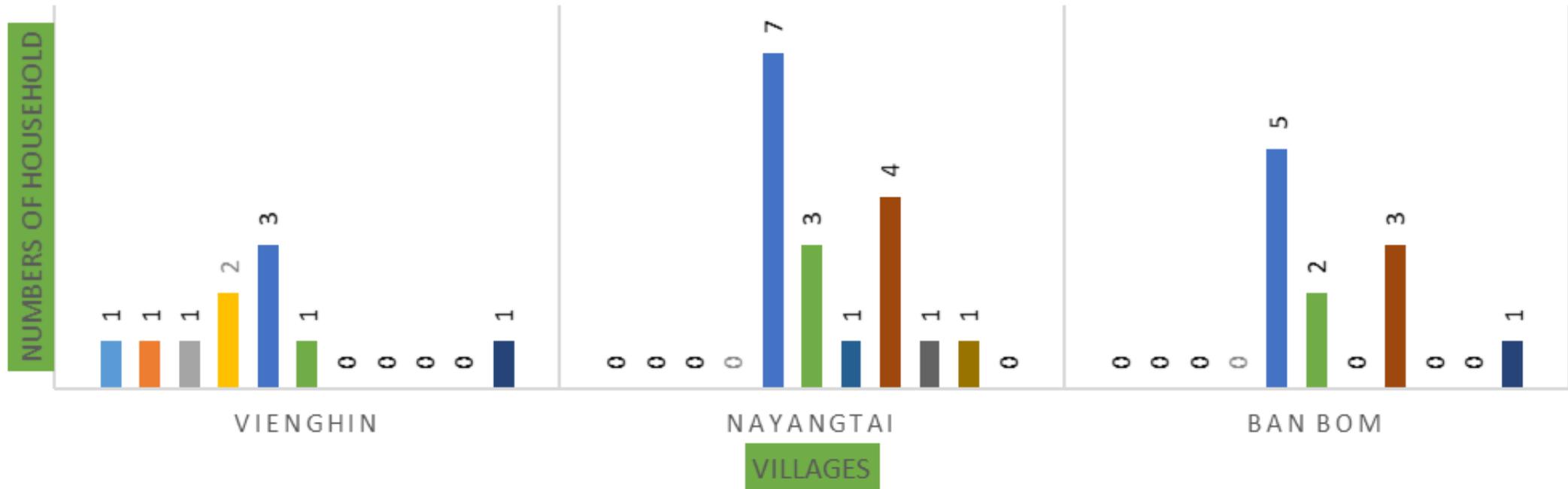
NUMBERS OF HOUSEHOLD



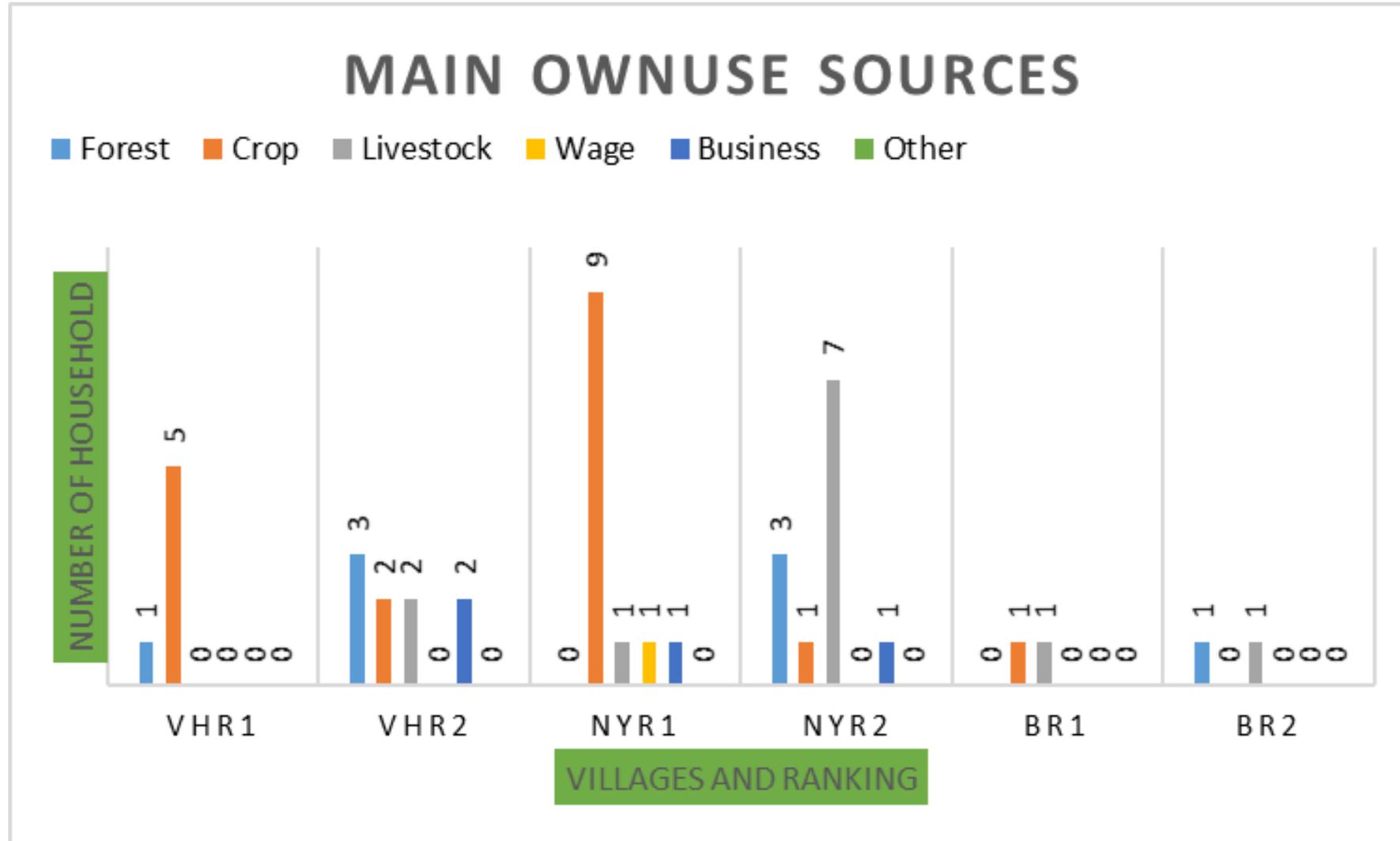
VILLAGES

## MAIN NTFP OF THREE VILLAGES

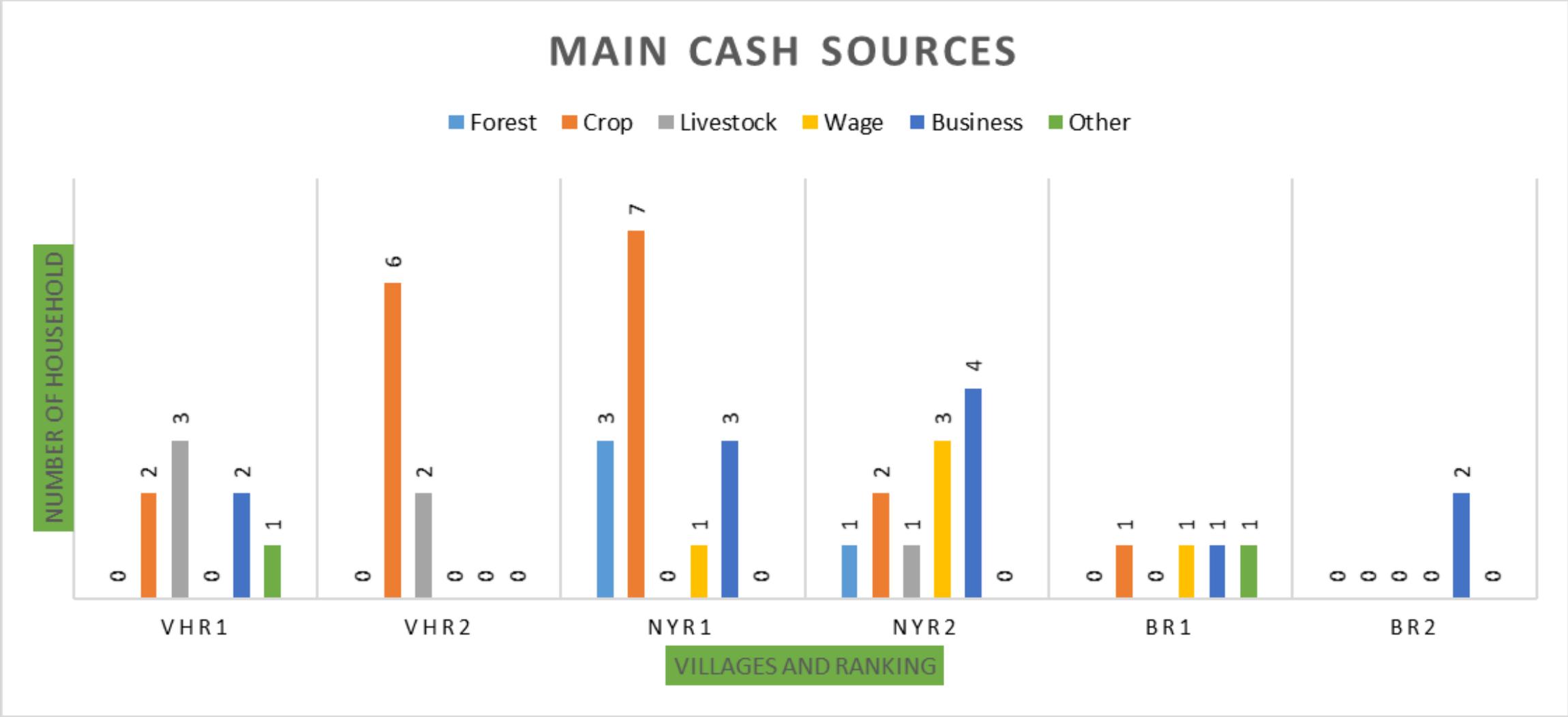
- Bloomgrass
- Malabar
- Ochid
- Konjak
- Bamboo shoot
- Wild Vegetable
- MhakPao
- Mushroom
- Bamboo pole
- Kok Kham Krua
- Bamboo worm



# Ranking of main own use sources 1/2



# Ranking of main cash sources 2/2

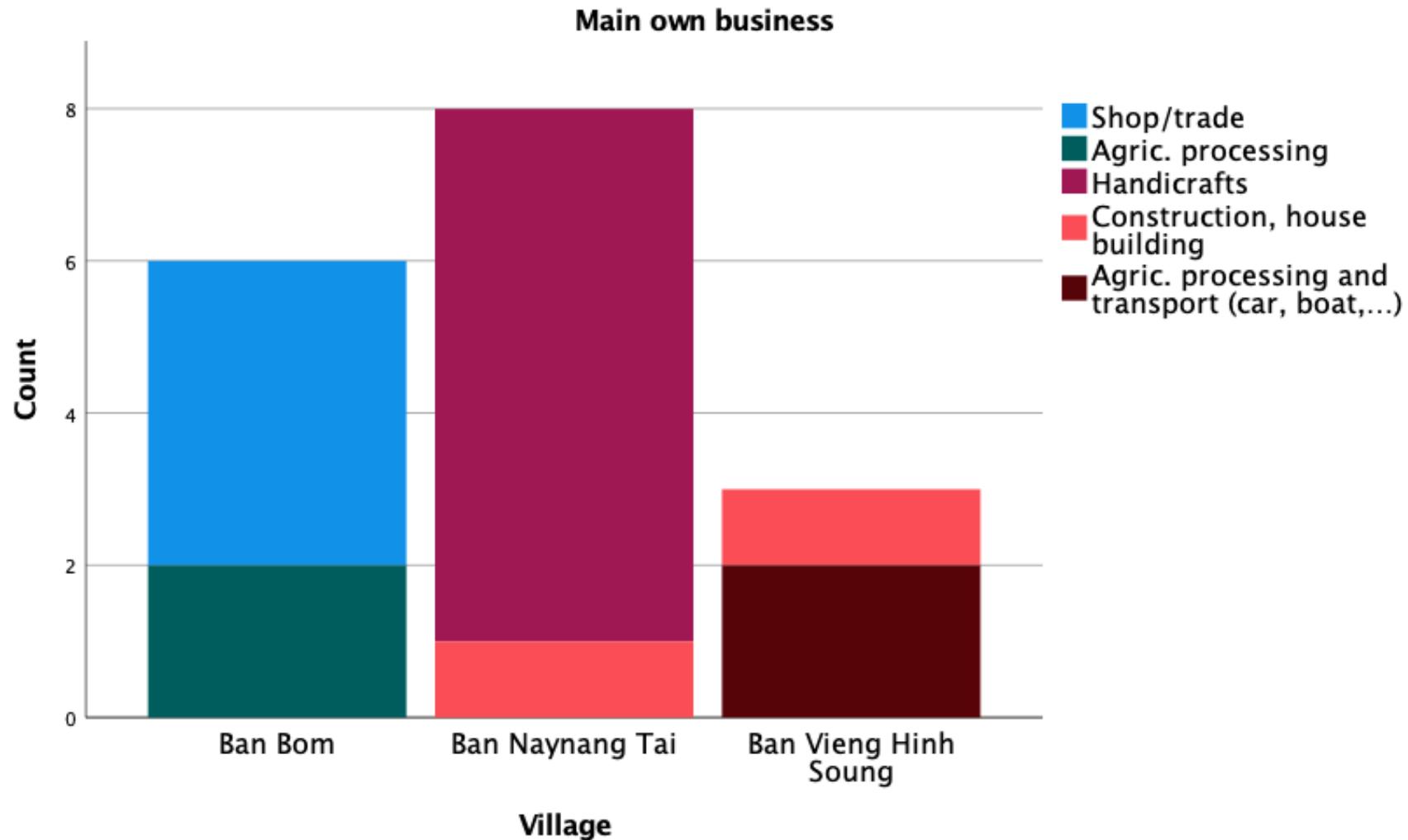


# MAIN IMPORTANT RANKING OF THREE VILLAGES

■ Timber ■ NTFP ■ Fire wood ■ Other ■ Rubber



# Main own business



A photograph of a traditional wooden structure, possibly a workshop or a drying rack, with several blue patterned textiles hanging on a rack. The structure is made of dark wood and has a corrugated metal roof. The background shows a rural setting with trees and other buildings.

# 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

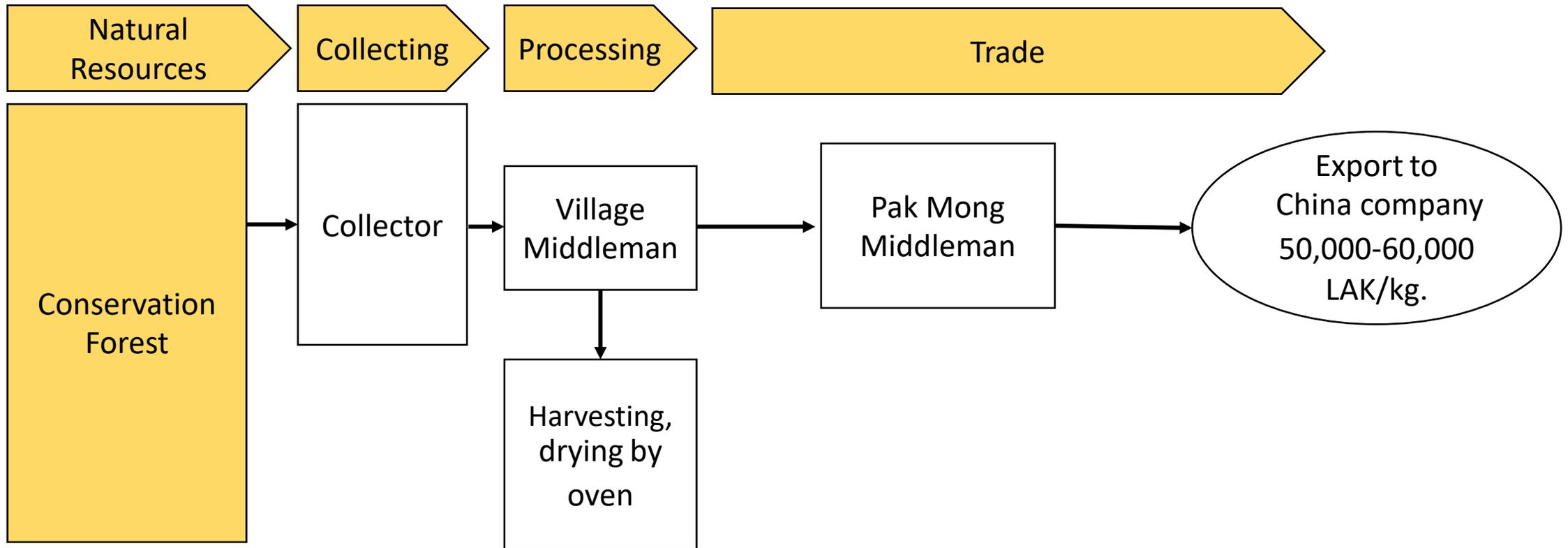
- **Collectors** get information about species, price and amounts from village middlemen.
- **Village middlemen** gets information from **trader**.
- Collector and village middlemen do not clearly know about final products and **markets**.
- Trader and Chinese middlemen do not share detailed information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

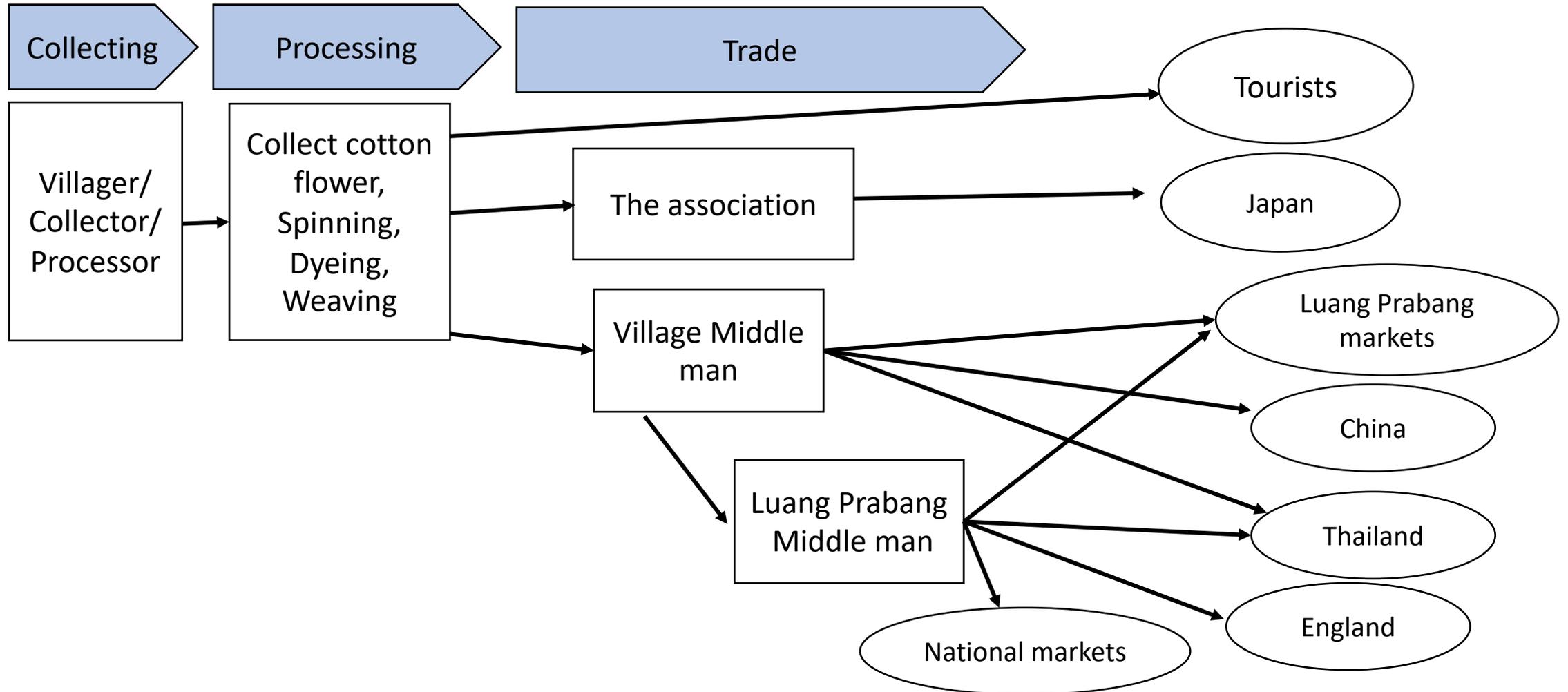
- 6 years ago, Japanese (Japan International Cooperation Agency (JICA)) started a development program for handicrafts (spinning, dyeing and weaving) with natural resources.
- Japanese provided money to households to buy new material to produce handicrafts.

## 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

## Strength

Beautiful and authentic surrounding

Hospitality

## Threat

Decline in cotton availability

Decline in natural product used for dyeing

## 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**

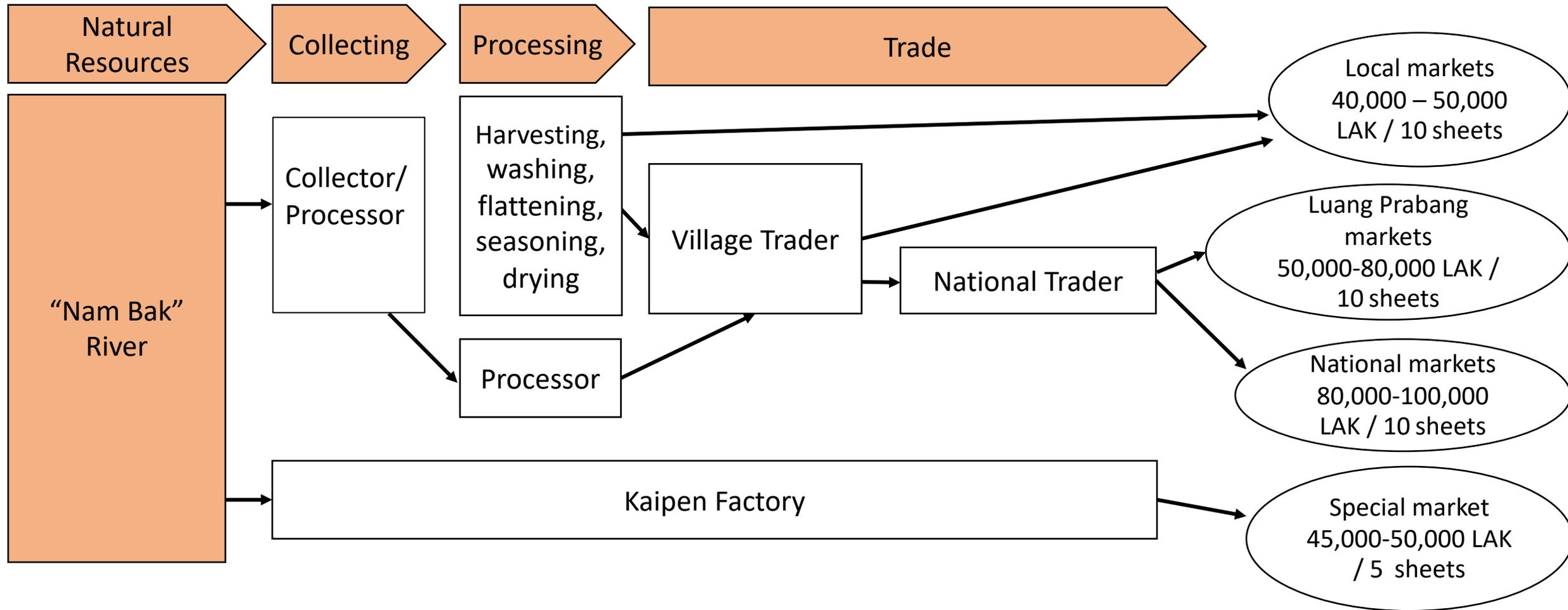
- Riverweed is collected from the Nambak river and processed into edible snacks
- Processing factory in Ban Bom
  - The factory is supported by Korean-funded project (started 15-20 years ago)

- **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



Luang Prabang markets



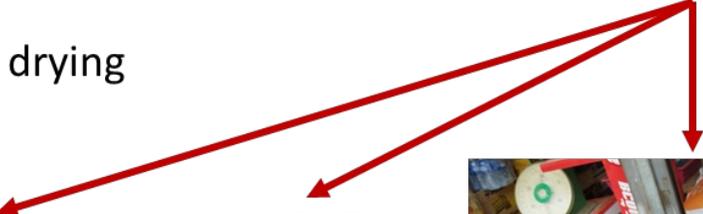
Kaipen company



Village middleman



Shop in village



# 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





# 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].