

**Northern Rural Infrastructure Development Sector Project Additional Financing  
Female Focused Extension Service (FFES) Activities  
Endline Survey – Report**

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## Executive Summary

1 Female focused extension services (FFES) activities are designed for and delivered by women and had been implemented under Activity 8 of the project-wide Gender Action Plan (GAP). The FFES activities aimed to improve the economic empowerment of poor ethnic minority women who did not benefit from the project.

2 The 1<sup>st</sup> batch of the target villages and activities for the FFES were conducted at 11 ethnic group villages such as Akha, Khmu, Lanten, Lamet and Lue in 5 subprojects with 131 households. The 2<sup>nd</sup> batch FFES activities were implemented at 4 ethnic group villages such as Khmu and Lue of 2 subprojects in Oudomxay province with 53 households.

3 Prior to starting the FFES activities, a baseline survey was conducted to monitor the impacts of FFES activities on participating households including household income and expenditure.

4 A total of 54 households in 3 subprojects and 4 villages, excluding Nam Ma and Houay Xo 2 subprojects, were surveyed for the 1<sup>st</sup> batch, and a total of 53 households in 6 villages were surveyed for the 2<sup>nd</sup> batch of the activities.

5 The surveyed household has average 5.11 members with 0.56 ha of lowland paddy and 1.21 ha of upland farm. Average household earned 20,409,242 kip in 2018, consisting of 63.8% of agricultural income and 36.2% of non-agricultural income. Rice sales (6.92 million kip per household) is the most important agricultural income source followed by the sales of livestock.

6 The average household expenditure of the FFES activities participating households in 2018 was 10,703,638 kip per household. The most important expenditure item was 'rice and food' in all 5 subprojects, and average expenditure on the item was 3,652,906 kip per household or 34.1% of total expenditure.

7 The purpose of the FFES Endline Survey is to grasp the data at the end of the FFES activities in order to evaluate the impacts of the activities in comparison with the data obtained in the Baseline Survey. Analysis items of the Endline Survey are; (1) profit derived directly from the implementation of FFES activities, (2) cost-effectiveness per village and activity, and (3) percentage of income from FFES activities, impact on spending, and use of education and health services (correlation analysis).

8 The Endline Survey is consisted of 5 steps - 1) Preparation, 2) Field Survey, 3) Data input and compile, 4) Data analysis, and 5) Development of the Report, and scheduled to carry out from September 2022 to January 2023, as shown in the Table I in the next page.

**Table i. Schedule of FFES endline Survey**

	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23
1. Preparation for Endline Survey					
(1) Preparation of ELS including Questionnaire	■				
(2) Preparation of Implementation (field planning, official letter, appointments)			■		
2. Implementation of Field Survey			■		
3. Data input and compile			■		
4. Data analysis			■		
5. Development of ELS Report					
(1) Development of Draft Report				■	
(2) Receive comments					■
(3) Development of Draft Final Report					■

■ International CD and gender specialist

■ National CD and gender specialist

**Northern Rural Infrastructure Development Sector Project Additional Financing  
Female Focused Extension Service (FFES) Activities  
Endline Survey –Report**

## **1. Introduction**

### **1.1. Implementation of the Female Focused Extension Service (FFES) Activities**

#### **(1) Approach and Selection of Activities for Female focused Extension Services**

9 Female focused extension services (FFES) activities are designed for and delivered by women and had been implemented under Activity 8 of the project-wide Gender Action Plan (GAP). The activities are also a part of Ethnic Group Development Plan of each subproject.

10 In this project, the FFES was planned and implemented with strong commitments of the Division for the Advancement of Women (DAW) of the Ministry of Agriculture and Forestry (MAF). At the village level, Lao Women's Union of each village played a leading role in planning and implementation of the activities with supports of PPO, DCO as well as NPMO and GIC.

11 The target areas of the project are located at lowland plains, and there were many poor ethnic minority households, who had migrated from mountainous areas and did not possess paddy fields. The FFES targeted poor ethnic minority households, who were not able to benefit from rural infrastructure improvement activities of the project. In order to ensure sustainability of the FFES activities, the first selected participants have an obligation to return the received amount with interest (cash or in kind) to the FFES committee of each village in two (2) years after starting the activities for extending the activities to the second group of participants.

12 Three (3) activities of i) goat and duck raising, ii) cardamom cultivation, and iii) vegetable/garlic/onion cultivation are identified during the consultations.

13 Goat and duck raising activities were delivered to poor and non-beneficiary ethnic minority households in order to reduce dependence on shifting cultivation in the catchment area while increasing their household income. Compared with other animals, goat and duck raising needs less labor input and the characteristic is very ideal as the recent commercialized agriculture and economic development keep the villagers very busy. Goat and duck can bring cash income in relatively short time and sales price is stable. At first, goat and duck raising activities were provided to non-beneficiary poor ethnic minority households. Then, goat and duck raising activity were to be expanded to all non-beneficiary households in the village (or sub-village). Pig and cricket raising activities were exceptionally selected and implemented in 3 Lanten villages of Nam Ma subproject in Long District of Luang Namtha Province as the villagers are familiar with these activities by a long-time experience.

14 Cardamom is currently one of the most attractive cash crops in Northern Laos as the plant needs almost no labor input to grow while brings good income (300,000 / 400,000 kip per kilogram for dry ordinary / improved Guang Dong specie cardamom) to the villagers from 3 to 7 years after planting of the saplings. Cardamom is usually planted on shady slope land with trees, and the villagers do not cut trees after the cardamom is planted as they expect good income from the plant.'

15 Vegetable, garlic and onion are commercially produced at non-contract basis and mainly sold at domestic market in Beng and Houn Districts of Oudomxay Province. Growing these crops are relatively light work and usually taken care of by women. With financial and technical supports by the project through Lao Women's Union at village level, even poor female-headed households can generate more income by selling these cash crops at the district markets.

16 The FFES activities were implemented by the eight (8) steps of procedure in Table 1.

**Table 1. The 8 Steps of FFES Implementation Procedure**

Step	Activities	Responsibility
1	<ul style="list-style-type: none"> <li>• Development of selection criteria</li> <li>• Village consultation (including study of villagers' requirement)</li> <li>• Selection of target group</li> <li>• Organizing of group (committee)</li> <li>• Contract signing</li> </ul>	GIC/CD Team PPO/DCO
2	<ul style="list-style-type: none"> <li>• Project planning (writing project proposal, financial planning, training plan, implementation delivery plan, monitoring and reporting plan)</li> <li>• Submission of project proposal to NPMO</li> </ul>	GIC/CD Team PPO/DCO
3	<ul style="list-style-type: none"> <li>• NPMO finalizing and approval</li> </ul>	PPO & NPMO
4	<ul style="list-style-type: none"> <li>• Baseline data collection</li> <li>• Preparation of cardamom/ vegetable planting and animal raising areas</li> <li>• Procurement arrangement of necessary materials and equipment</li> </ul>	PPO & DCO
5	<ul style="list-style-type: none"> <li>• Delivery training to farmers on the activities of Female-focused Extension Services</li> </ul>	PAFO/PPO & DAFO/DCO
6	<ul style="list-style-type: none"> <li>• Delivery of necessary materials and equipment to farmers</li> </ul>	PPO & DCO
7	<ul style="list-style-type: none"> <li>• Implementation of the activities by 1<sup>st</sup> group of participants</li> </ul>	PPO & DCO, Village Authorities
8	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> group of participants return the received amount to FFES committee for extending the activities to the second group of participants</li> </ul>	PPO & DCO, Village Authorities

**(2) Implementation of the 1<sup>st</sup> Batch of FFES Activities**

17 The 1<sup>st</sup> batch of the target villages and activities for the Female-focused Extension Services (FFES) were conducted at 11 ethnic group villages such as Akha, Khmu, Lanten, Lamet and Lue in 5 subprojects with 131 households as summarized in the table 2.

**Table 2. Summary of Batch 1 FFES Activities Implementation**

Prov.	Dist.	Subproject	Village	Ethnic Group	Activities	Participating Households
PSL	Bountai	Nam Ngen2 (Phase II)	Bohaad	Akha	Goat raising	14 HHs
ODX	Beng	Nam Hao (Phase II)	Houay Luck	Khmu	Cardamom cultivation	10 HHs
					Goat raising	5 HHs
LNT	Long	Nam Ma (Phase III)	(1) Houa Khoua 1&2 (2) Nam An (3) Nong Kham	Lanten (Lao Houay)	Pig raising	10HHs
					Duck raising	11 HHs
					Cricket raising	1 HH
BKO	Pha Oudom	Houay Bong (Phase II)	Hat Mouak	Lamet	Cardamom cultivation	10 HHs
					Goat raising	5 HHs
		Pak Tha	Houay Xo 2 (Phase II)	(1) Dong (2) Pangsa (3) Pakso (4) Khonteun	Lue	Revolving Fund for Commercial Crop Production

18 **Phongsaly Province:** Goat raising was proposed as FFES activity for “Nam Ngene 2 subproject (Phase II)”, which covers one (1) village of Bohaad. Bohaad village has 16 **Akha** households living in Chavang area, 7 kilometers away from the main residential area of Khmu ethnic group in the village. All of the Akha households were not beneficiaries of the project. Thus, the Akha

households were given priority in the selection of participating households of the FFES activities in the village. In May 2019, the project firstly provided 3 -4 goats to each of the selected 14 Akha households. After one year, the remained 2 households also received baby goats for raising. Total 51 goats were provided with support of the project. In June 2021, the FFES activity in Chavang area of Bohaad village was completed. As of June 2021, 117 goat babies were born, 42 goats were sold, and 123 goats were still kept by the all 16 Akha households.

19 **Oudomxay Province:** Goat raising and cardamom growing were proposed as FFES activities for “Nam Hao subproject (Phase II)”, which covers one (1) village of Houayluck. Houayluck is the only non-Lao-Tai (**Khmu**) village among the other beneficiary villages of Lao-Tai ethno-linguistic group in the subproject. The number of beneficiary households in Houayluck are much less than other villages of the subproject, as the Khmu people in Houayluck recently came down to the area from the surrounding mountainous area, and few households possess paddy fields. In May 2019, the project supported 38 goats to 5 Khmu households, and 17,500 saplings of cardamom were provided to other 10 Khmu households. By the end of June 2021, the 1<sup>st</sup> group of 5 households for goat raising repaid to the village revolving fund with interests. Regarding cardamom cultivation, it usually takes 4 years since planting to harvest cardamom seeds, so the 1<sup>st</sup> group of 10 households for cardamom cultivation are still continuing the activity.

20 **Luang Namtha Province:** Six (6) FFES activities of pig raising, goat raising, cricket raising, cucumber growing, garlic growing, and growing vegetables in greenhouse were proposed for “Nam Ma subproject (Phase III)”, which covers three (3) villages of Houa Khoua 1+2, Nam An and Nong Kham. These all three (3) are villages belonging to non-Lao-Tai ethno-linguistic groups of **Lanten (Lao Houay)** ethnic group, and the villagers possess less paddy fields compared with the other beneficiary villages of the subproject. In June 2019, the project supported by providing 5 pigs with necessary materials and equipment to 10 households, and 40 ducks with necessary materials and equipment to 11 households, and crickets with necessary materials and equipment to 1 household in the three (3) Lanten villages. During the 2019/2020 dry season, these 22 Lanten households mobilized profits gained from the pig, goat and cricket raising activities to conduct cucumber growing (4 households), garlic growing (17 households) and vegetables growing in greenhouse (1 household). By the end of June 2021, the 1<sup>st</sup> group of 22 households for pig, duck and cricket raising activities (with cucumber, garlic and vegetables growing in greenhouse) repaid to the village revolving fund with interests.

21 **Bokeo Province:** Goat raising and cardamom growing were proposed as FFES activities for “Houay Bong subproject (Phase II)”, which covers two (2) villages of Hat Mouak and Van Pom. Both Hat Mouak and Van Pom are villages of **Lamet** ethnic group with less paddy fields. The FFES participants in Hat Mouak and Van Pom are consisting of 15 households of goat raising members (5 HHs for Hat Mouak and 10 HHs for Van Pom) and 10 households of cardamom growing in Hat Mouak. By the end of June 2021, the 1<sup>st</sup> group of 25 households for goat raising and cardamom growing activities repaid to the village revolving fund with interests.

22 **Additional 1<sup>st</sup> Batch FFES Activity:** The four (4) beneficiary villages of Houay Xo 2 Subproject (Paktha District, Bokeo Province) – (i) Dong; ii) Pangsa; (iii) Pak Xo; and (iv) Khonteun – have long been producing job’s tear at more than 1,000 hectares as sedentary agriculture at commercial basis. However, the villagers have insufficient cash for the cropping, many of them borrow money from middlemen at very high interest or from the government policy banks such as Nayoby Bank with complicated and time-consuming paperwork. In case of poor crops due to the bad weather and/or spreads of pest and diseases, the farmers face the risk of losing their farmlands. About 33 million kip were allocated to each village of Houay Xo 2 subproject as revolving fund for promoting commercial crop production. In each village, 12 to 16 households borrowed from the fund for purchasing input goods for commercial crop production with annual interest rate of 5% per year.

### (3) Implementation of the 2<sup>nd</sup> Batch of FFES Activities

23 The 2<sup>nd</sup> batch FFES activities were implemented at 4 villages in Nam Beng subproject (Phase I, Beng district) and at 2 villages in Nam Ngaad subproject (Phase III, Houn district) in Oudomxay province with 53 households. The 2<sup>nd</sup> batch of the target villages and activities for the FFES are summarized in the Table 3.

Table 3. Summary of Batch 2 FFES Activities Implementation

Prov.	Dist.	Subproject	Village	Ethnic Group	Activities	Participating Households
ODX	Beng	Nam Beng (Phase I)	Namet	Lue	Garlic cultivation	10 HHs
			Yo			10 HHs
			Pandea			5 HHs
			Xiang Lae			4 HHs
	Houn	Nam Ngaad (Phase III)	Somxay	Khmu	Organic vegetable production with green house	12 HHs
			Na			12 HHs

24 Implementation of the 2<sup>nd</sup> batch FFES activities at Nam Beng subproject commenced in December 2019 for the project period of 2 dry seasons. In June 2021, after completion of the 2<sup>nd</sup> dry seasons cultivation, the 29 households repaid to the revolving fund with interest and management fees.

25 For Nam Ngaad subproject, vegetable cultivation in greenhouse activity targeted 12 households in each of 2 villages commenced in March 2021. The 1<sup>st</sup> group of 24 participating households is schedule to repay to the village revolving funds by March 2023.

### (4) Completion and handing-over of the FFES activities to the relevant PAFO/DAFO

26 The 1<sup>st</sup> batch of FFES commenced in May -June 2019 for the activity period of 2 years by providing necessary input goods and equipment. Total 76 households in 7 poor ethnic minority villages of 4 subprojects in 4 target provinces participated in the FFES activities. All activities except cardamom cultivation have been completed by the end of September 2021. But repayment to the revolving fund by the 1<sup>st</sup> round of households have not completed yet in some subprojects. The project instructed the relevant PPO and DCO to complete the repayment and continue the activities by involving new households in each village. Regarding cardamom cultivation, it usually takes 4 years to harvest the first fruits of the crop. Thus, the first participating households in the activity are still continuing growing the crop.

27 The 2<sup>nd</sup> batch of FFES commenced their activities in December 2019 (Nam Beng) and in March 2021 (Nam Ngaad) for the activity period of 2 years. Total 53 households in 6 poor ethnic minority villages of two (2) subprojects in Oudomxay province participated in the activities.

28 The remaining assignment period of the GIC national community development and gender specialist is rather limited. Therefore, during her fieldwork in September 2021, the specialist discussed and agreed with the relevant PAFO/DAFO on handing-over of both 1<sup>st</sup> and 2<sup>nd</sup> batches of the FFES activities from the project to them. During her fieldwork, implementation plan was developed and would be implemented by the relevant PAFO/DAFO since October 2021. On 18 October 2021, the roles of establishment and strengthening of WUGs and gender development activities including FFES activities were officially transferred to the relevant PPO and DCO for continuous implementation.

## 1.2. Baseline Survey on the FFES Activities

### (1) Objective and Technical Approach

29 Prior to starting the 1st and 2nd batch activities, a baseline survey was conducted to monitor the impacts of FFES activities on participating households, especially on household income. An Endline Survey is scheduled to be conducted in November 2022.

30 Field survey was conducted in December 2019 for target villages of both 1<sup>st</sup> and 2<sup>nd</sup> batch FFES activities by visiting and interviewing each household by relevant PPO and DCO staffs. The survey target is all households participating in FFES activities. The households actually surveyed are shown in Table 4 by sub-project, village and ethnic group.

Table 4. Surveyed Households by Subproject, Village and Ethnic Group

Batch of FFES Activities	Prov.	Dist.	Subproject	Village	Ethnic Group	Number of Surveyed Households
1 <sup>st</sup> Batch	PSL	Bountai	Nam Ngen2 (Phase II)	Bohaad	Akha	14 HHs
				Houay Luck	Khmu	10 HHs
	5 HHs					
	BKO	Pha Oudom	Houay Bong (Phase II)	Hat Mouak	Lamet	10 HHs
				Van Pom	Lamet	5 HHs
						10 HHs
2 <sup>nd</sup> Batch	ODX	Beng	Nam Beng (Phase I)	Namet	Lue	10 HHs
				Yo		10 HHs
				Pandeu		5 HHs
				Xiang Lae		4 HHs
				Houn	Nam Ngaad (Phase III)	Somxay
	Na	12 HHs				
	<b>TOTAL</b>			<b>5 Subprojects</b>	<b>10 Villages</b>	

31 A total of 54 households in 3 subprojects and 4 villages, excluding Nam Ma and Houay Xo 2 subprojects, were surveyed for the 1<sup>st</sup> batch, and a total of 53 households in 6 villages were surveyed for the 2<sup>nd</sup> batch of the activities.

32 The collected questionnaires were analyzed by the GIC Community Development and Gender Team and summarized as a report.

### (2) Questionnaire Development and Survey Items

33 The questionnaire was drafted by the GIC's Community Development and Gender Team and modified with advice from ADB's Gender Officer. The survey items are shown as follows.

- |   |
|---|
| <p>A. Characteristics of Participating Households</p> <ol style="list-style-type: none"> <li>(1) Head of Households</li> <li>(2) Number of Households in the House</li> <li>(3) Number of Household Members in the House</li> <li>(4) Ethnic Group (Husband and Wife)</li> <li>(5) Educational Background (Husband and Wife)</li> <li>(6) Land Ownership</li> </ol> |
|---|



**B. Agricultural Income, Cost and Profit**

- (1) Rice
- (2) Rubber
- (3) Cardamom
- (4) Sugarcane
- (5) Cassava
- (6) Job's Tear
- (7) Maize
- (8) Leafy Vegetables
- (9) NTFP
- (10) Other Crops by Own Fund
- (11) Other Crops by Project Fund
- (12) Livestock and Aquaculture by Own Fund
- (13) Livestock and Aquaculture by Project Fund
- (14) Others

**C. Non-Agricultural Income, Cost and Profit**

- (1) Agriculture Labor for Other Households
- (2) Non-Agriculture Labor
- (3) Monthly Salary
- (4) Handicraft
- (5) Business, Trade, Retails, and Restaurant
- (6) Others

**D. Expenditure by Category**

- (1) Food
- (2) Education
- (3) Clothes
- (4) Medicine
- (5) House Repair
- (6) Energy (Electricity, Gas and Charcoal)
- (7) Transportation
- (8) Social Expenditure
- (9) Others

**E. Education of the Family Members**

- (1) Number of Household Members at Age 7 – 16 (Female, Male and Total)
- (2) Number of Attending at Primary and Secondary Schools (Female, Male and Total)
- (3) Number of Household Members at Age 17 – 25 (Female, Male and Total)
- (4) Number of Attending at College and University (Female, Male and Total)

**F. Medical Care Used by the Family Members**

- (1) Usage of Medical Facilities in 2018
- (2) Used Medical Facilities (Hospital, Dispensary, Clinic)
- (3) Distance of the Medical Facilities from the House

### 3. Characteristics of Participating Households

#### 3.1. Participant and Female-Headed Household (FHH)

34 FFES activities were carried out by women. Therefore, all participating households should have either a wife of a married couple or a female head of a household. However, since all 16 households of the Akha ethnic group households in Chavan area of Bohaad village were selected to participate in the activities, one household headed by a widowed man is included.

35 As for Female Headed Household (FHH), 1 FHH in Nam Ngene 2 subproject, 4 FHHs in Nam Beng, and 3 FHHs in Nam Ngaad participated in the FFES activities. No FHHs of Nam Hao and Houay Bong participated in FFES activities.

#### 3.2. Number of Families and the Members in the Household

36 Average number of families in the surveyed households is 1.24 families per household, which are varied from 1.08 families per household in Nam Ngene 2 and Houay Bong subprojects to 1.46 families per household in Nam Hao.

37 Average number of members in the household is 5.11 members per household, which are varied from 4.34 members per household in Nam Beng subproject to 6.00 members per household.

Table 5. Number of Families and the Members in the Household

	(families/ persons per household)					Average of 5 Subprojects (N=107)
	Batch 1			Batch 2		
	Nam Hao (N=15)	Nam Ngene 2 (N=14)	Houay Bong (N=25)	Nam Beng (N=29)	Nam Ngaad (N=24)	
No. of families in the household	1.46	1.08	1.08	1.41	1.17	1.24
No. of HH members in the household	6.00	5.00	5.24	4.34	5.33	5.11

#### 3.3. Ethnic Group

38 All the surveyed villages basically consist of people of one ethnic group, and to some extent people of other ethnic groups live there through marriage.

Table 6. Ethnic Group of Husband and Wife in the Surveyed Households

	Batch 1						Batch 2			
	Nam Hao		Nam Ngene2		Houay Bong		Nam Beng		Nam Ngaad	
	Husband (N=15)	Wife (N=15)	Husband (N=13)	Wife (N=13)	Husband (N=25)	Wife (N=25)	Husband (N=25)	Wife (N=29)	Husband (N=20)	Wife (N=24)
Khmu	15 (100%)	15 (100%)	0 (0%)	0 (0%)	0 (0%)	1(4%)	0 (0%)	0 (0%)	20 (100%)	24 (100%)
Akha	0 (0%)	0 (0%)	13 (100%)	13 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Lamet	0 (0%)	0 (0%)	0 (0%)	0 (0%)	25 (100%)	23 (92%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Lue	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1(4%)	25 (100%)	29 (100%)	0 (0%)	0 (0%)
Total	15 (100%)	15 (100%)	13 (100%)	13 (100%)	25 (100%)	25 (100%)	25 (100%)	29 (100%)	20 (100%)	24 (100%)

39 Houayluck, a target village of 1<sup>st</sup> batch FFES activities in Oudomxay province, is a Khmu village built relatively recently by immigrants from the surrounding mountainous areas to the plains near the Beng river. Bohaad village in Bountai District of Phongsaly Province is basically a Khmu village with an Akha residential area of Chavang, which is located 7 kilometers away from the Khmu residential area in the village. The FFES activities in Bohaad village targeted the Akha people, who did not possess paddy field and receive no benefits from the rural infrastructure improvement project. The FFES activities in Houay Bong subproject targeted 2 villages of Houay Mouak and Van Pom, both of which are villages of Lamet ethnic group.

40 Nam Beng subproject has 4 targeted villages of Namet, Yo, Pandoua and Xiang Lae, all of which are the villages of Lue ethnic group. Somxay and Na of Nam Ngaad subproject are the target villages of 2<sup>nd</sup> batch FFES activities, and they are villages of Khmu ethnic group.

### 3.4. Educational Background

41 Educational background in the surveyed households are quite varied by villages.

42 More than 90% of both husband and wife of the target Akha households at Nam Ngene 2 subproject (Chavan area of Bohaad village) and wife of the target Lamet households at Houay Bong subproject (Houay Mouak and Van Pom villages) had never received education.

43 Except the 2 subprojects mentioned above, most of the head of household or his/her spouse had received primary or secondary school education. There were no households in which the head of household or his/her spouse had a college or university degree.

Table 7. Educational Background of Husband and Wife in the Surveyed Households

	Batch 1						Batch 2			
	Nam Hao		Nam Ngene2		Houay Bong		Nam Beng		Nam Ngaad	
	Husband (N=15)	Wife (N=15)	Husband (N=13)	Wife (N=13)	Husband (N=25)	Wife (N=25)	Husband (N=25)	Wife (N=29)	Husband (N=20)	Wife (N=24)
No Education	13%	33%	92%	100%	40%	92%	0%	7%	0%	13%
Primary	47%	27%	8%	0%	52%	8%	28%	52%	45%	54%
Lower Secondary	27%	33%	0%	0%	8%	0%	48%	38%	40%	25%
Upper Secondary	13%	7%	0%	0%	0%	0%	24%	3%	15%	8%
College/ University	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

### 3.5. Land Ownership

44 The surveyed households in the both batch 1 and 2 FFES target villages of the 5 subprojects had average 0.56 ha of lowland paddy per household, varying from 0.21 ha per household at Chavan area of Bohaad village in Nam Ngene 2 subproject in Phongsaly Province to 0.68 ha per household at Houay Mouak and Van Pom villages of Houay Bong subproject in Bokeo Province.

45 For land ownership of upland farm, the surveyed households had average 1.21 ha of upland farm per household, varying from 0.58 ha per household at Chavan area of Bohaad village in Nam Ngene 2 subproject in Phongsaly Province to 1.92 ha per household at Houayluck village of Nam Hao subproject in Oudomxay Province.

Table 8. Land Ownership of Lowland Paddy and Upland Farm

(ha/ household)

	Batch 1			Batch 2		Average of 5 Subprojects (N=107)
	Nam Hao (N=15)	Nam Ngene 2 (N=14)	Houay Bong (N=25)	Nam Beng (N=29)	Nam Ngaad (N=24)	
	Land Ownership Lowland Paddy	0.34	0.21	0.68	0.64	
Land Ownership Upland	1.92	0.58	0.72	1.39	1.43	1.21

## 4. Income and Expenditure

### 4.1. Overview

46 The survey results revealed that average annual household income significantly exceeded average annual household expenditure in all five (5) target subprojects at average surplus of 9,705,604 kip per household.

47 Average annual household income of the surveyed households in the five (5) target subprojects in 2018 were 20,409,242 kip per household varying from 7,112,000 kip per household in Houay Bong subproject to 31,210,448 kip per household in Nam Beng subproject.

48 Average annual household expenditure of the surveyed households in the five (5) target subprojects in 2018 were 10,703,638 kip per household varying from 2,682,800 kip per household in Houay Bong subproject to 15,681,483 kip per household in Nam Beng subproject.

49 The surveyed households depend more on agricultural income than non-agricultural income. The average ratio of household income of surveyed households in the five (5) target subprojects was composed of 63.8% of agricultural income and 36.2% of non-agricultural income.

Table 9. Annual Household Income, Expenditure and Cash Flow (2018)

	Batch 1			Batch 2		Average of 5 Subprojects
	Nam Hao	Nam Ngene 2	Houay Bong	Nam Beng	Nam Ngaad	
Average HH Income (A)	12,207,066.7	14,655,178.6	7,112,000.0	31,210,448.3	30,592,075.4	20,409,242.0
(1) Agricultural Income	7,370,400.0 60.4%	14,655,178.6 100.0%	4,108,000.0 57.8%	20,282,862.1 65.0%	16,752,022.7 54.8%	13,029,660.2 63.8%
(2) Non-Agricultural Income	4,836,666.7 39.6%	- 0.0%	3,004,000.0 42.2%	10,927,586.2 35.0%	13,840,052.7 45.2%	7,379,581.8 36.2%
Average HH Expenditure (B)	9,430,000.0	5,776,428.6	4,429,200.0	15,681,482.8	15,309,666.7	10,703,638.4
Cash Flow (C) = (A) - (B)	2,777,066.7	8,878,750.0	2,682,800.0	15,528,965.5	15,282,408.8	9,705,603.6

### 4.2. Agricultural Income

50 Average annual household agricultural income of the surveyed households in the five (5) target subprojects in 2018 were 13,029,660 kip per household varying from 4,108,000 kip per household in Houay Bong subproject to 20,282,862 kip per household in Nam Beng subproject.

51 The most important agricultural income source is the rice sales including both paddy and upland rice, followed by the sale of livestock and maize.

52 Household annual income from rice sales was 6.92 million kip per household on average for the surveyed households in the five (5) subprojects, greatly varying from 1.98 million kip per household in Houay Bong subproject to 15.67 million kip per household in Nam Beng subproject.

53 The ratio of rice sales to the total agricultural income was 53.1% on average for the five (5) subprojects, varying the ratio from 30.9% in Nam Hao subproject to 77.3% in Nam Beng subproject.

54 The second most important agricultural income source is livestock and aquaculture sales and was 1.49 million kip per household or 11.4% on average for the five (5) subprojects. The Baseline Survey covers the year 2018, before the start of FFES activities, and all income from livestock and aquaculture sales came from own investments and not from project support.

Table 10. Details of Annual Household Agricultural Income (2018)

	Batch 1			Batch 2		Average of 5 Subprojects
	Nam Hao	Nam Ngene 2	Houay Bong	Nam Beng	Nam Ngaad	
Rice	2,275,000.0 30.9%	6,491,964.3 44.3%	1,980,000.0 48.2%	15,672,827.6 77.3%	5,370,166.7 32.1%	6,919,646.1 53.1%
Rubber	2,820,733.3 38.3%	0.0 0.0%	108,000.0 2.6%	196,551.7 1.0%	2,187,727.3 13.1%	979,270.0 7.5%
Cardamon	0.0 0.0%	7,382,857.1 50.4%	0.0 0.0%	0.0 0.0%	0.0 0.0%	984,381.0 7.6%
Sugarcane	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Cassava	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Job's Tear	0.0 0.0%	87,500.0 0.6%	0.0 0.0%	0.0 0.0%	0.0 0.0%	11,666.7 0.1%
Maize	1,798,000.0 24.4%	42,857.1 0.3%	0.0 0.0%	1,084,517.2 5.3%	3,359,000.0 20.1%	1,309,218.7 10.0%
Leafy Vegetables	0.0 0.0%	0.0 0.0%	0.0 0.0%	404,827.6 2.0%	1,173,913.0 7.0%	372,421.5 2.9%
NTPF	133,333.3 1.8%	485,714.3 3.3%	0.0 0.0%	86,206.9 0.4%	113,636.4 0.7%	131,951.0 1.0%
Other Crops by Own Fund	0.0 0.0%	0.0 0.0%	0.0 0.0%	10,344.8 0.1%	1,314,583.3 7.8%	303,136.3 2.3%
Other Crops by Project Fund	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Livestock/ Aquaculture by Own Fund	83,333.3 1.1%	21,428.6 0.1%	2,020,000.0 49.2%	2,827,586.2 13.9%	1,176,087.0 7.0%	1,491,627.8 11.4%
Livestock/ Aquaculture by Project Fund	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Others	260,000.0 3.5%	142,857.1 1.0%	0.0 0.0%	0.0 0.0%	2,056,909.1 12.3%	526,341.1 4.0%
Sub-Total of Agriculture	7,370,400.0 100.0%	14,655,178.6 100.0%	4,108,000.0 100.0%	20,282,862.1 100.0%	16,752,022.7 100.0%	13,029,660.2 100.0%

55 The third most important income source in agriculture is maize sales and was 1.31 million kip per household or 10.0% on average for the five (5) subprojects. The maize sales greatly varied as it shared more than 20% in Nam Hao and Nam Ngaad subprojects in Oudomxay Province and about 5% in Nam Beng subproject in Oudomxay. However, maize sales shared less than 1% in Nam Ngene 2 subproject in Phongsaly Province and Houay Bong subproject in Bokeo Province.

56 Rubber sales was important in subprojects such as Nam Hao and Nam Ngaad, which shared 38.3% and 13.1% in agricultural income respectively.

57 For the 107 surveyed households, no households received income from sugarcane and cassava production and sales in 2018.

### 4.3. Non-Agricultural Income

58 Average annual household non-agricultural income of the surveyed households in the five (5) target subprojects in 2018 were 7,379,582 kip per household. Regarding Nam Ngene 2, 16 surveyed Akha households living isolated on the mountainous area located 7 kilometers away from the Kham ethnic group residential area reported no non-agricultural income in 2018.

59 The most and by far important non-agricultural income source is the monthly salary at 3.89 million kip per household or 52.7% on average for the five (5) subprojects, followed by non-agriculture labor for other households (16.7%) and agriculture labor for other households (12.8%).

60 However, the importance of each income source in terms of non-agricultural income varies significantly from subproject to subproject. Monthly salary shared more than 70 percent in Nam Ngaad subproject, but it shared 42 to 45 percent in Nam Hao and Nam Beng subprojects, and only 4% in Houay Bong subproject.

Table 11. Details of Annual Household Non-Agricultural Income (2018)

	Batch 1			Batch 2		Average of 5 Subprojects
	Nam Hao	Nam Ngene 2	Houay Bong	Nam Beng	Nam Ngaad	
Agriculture Labor for Other HH	686,666.67 14.2%	0.00 -	2,444,000.00 81.4%	1,041,379.31 9.5%	0.00 0.0%	947,783.25 12.8%
Non-Agriculture Labor for Other HH	1,073,333.33 22.2%	0.00 -	440,000.00 14.6%	1,510,344.83 13.8%	2,568,181.82 18.6%	1,233,482.61 16.7%
Monthly Salary	2,040,000.00 42.2%	0.00 -	120,000.00 4.0%	4,896,551.72 44.8%	10,113,043.48 73.1%	3,890,666.10 52.7%
Handicraft	570,000.00 11.8%	0.00 -	0.00 0.0%	51,724.14 0.5%	86,363.64 0.6%	114,469.32 1.6%
Business, Trade, Retails, Restaurant	133,333.33 2.8%	0.00 -	0.00 0.0%	517,241.38 4.7%	239,130.43 1.7%	206,710.93 2.8%
Others	333,333.33 6.9%	0.00 -	0.00 0.0%	2,910,344.83 26.6%	833,333.33 6.0%	986,469.62 13.4%
Sub-Total of Non-Agriculture	4,836,666.67 100.0%	0.00 -	3,004,000.00 100.0%	10,927,586.21 100.0%	13,840,052.70 100.0%	7,379,581.83 100.0%

61 For Houay Bong subproject, income from agriculture labor for other households was 2.44 million kip per household and shared 81.4% of the total of non-agricultural income.

#### 4.4. Expenditure

62 The average household expenditure of the FFES activities participating households in 2018 was 10,703,638 kip per household, varying from 4,429,200 kip per household in Houay Bong subproject to 15,681,482 million kip per household in Nam Beng subproject.

63 The most important expenditure item was 'rice and food' in all 5 subprojects, and average expenditure on the item was 3,652,906 kip per household or 34.1% of total expenditure. The share of rice and food expenditure in total expenditure ranges from 26.6% in Nam Beng subproject to 51.8% in Nam Hao subproject.

64 Rice and food expenditure was followed by clothes (13.0%), social expenditure (12.7%), education (11.5%) and medical care (10.4%). The importance of expenditure items except rice and food was different by subprojects. Expenditure on clothes was important in Nam Ngene 2 and Haouy Bong subprojects. However, social expenditure was more important in Nam Beng and Nam Hao subprojects, while spending on education (17.7%) was much higher than that on clothing (8.6%) in Nam Ngaad subproject.

Table 12. Details of Annual Household Expenditure (2018)

	Batch 1			Batch 2		Average of 5 Subprojects
	Nam Hao	Nam Ngene 2	Houay Bong	Nam Beng	Nam Ngaad	
Rice and food	4,886,666.7 51.8%	2,264,285.7 39.2%	1,268,000.0 28.6%	4,172,413.8 26.6%	5,591,666.7 36.5%	3,652,906.4 34.1%
Education	376,466.7 4.0%	0.0 0.0%	580,000.0 13.1%	1,634,482.8 10.4%	2,709,565.2 17.7%	1,231,500.9 11.5%
Clothes	781,333.3 8.3%	1,457,142.9 25.2%	1,072,000.0 24.2%	2,051,724.1 13.1%	1,314,583.3 8.6%	1,389,205.3 13.0%
Medicine	816,533.3 8.7%	339,285.7 5.9%	476,000.0 10.7%	2,035,862.1 13.0%	1,366,666.7 8.9%	1,111,107.4 10.4%
House repair	114,666.7 1.2%	0.0 0.0%	20,000.0 0.5%	913,793.1 5.8%	2,647,058.8 17.3%	861,160.2 8.0%
Energy (electricity and gas, charcoal)	432,066.7 4.6%	191,428.6 3.3%	149,200.0 3.4%	253,379.3 1.6%	233,652.2 1.5%	241,332.3 2.3%
Transportation	856,666.7 9.1%	671,428.6 11.6%	276,000.0 6.2%	1,992,241.4 12.7%	1,008,695.7 6.6%	1,020,468.7 9.5%
Social expenditure	1,140,000.0 12.1%	717,142.9 12.4%	588,000.0 13.3%	2,627,586.2 16.8%	1,245,833.3 8.1%	1,358,903.1 12.7%
Others	25,600.0 0.3%	135,714.3 2.3%	0.0 0.0%	0.0 0.0%	140,363.6 0.9%	53,835.5 0.5%
Total Expenditure	9,430,000.0 100.0%	5,776,428.6 100.0%	4,429,200.0 100.0%	15,681,482.8 100.0%	15,309,666.7 100.0%	10,703,638.4 100.0%

## 5. Education and Medical Care

### 5.1. Education

65 As indicated in Table 5, average number of household members of participating households in 5 subprojects was 5.1 person per household. An average household had 1.9 person of school age members from 7 to 25 years, consisting of 1.4 person of members at the age of 7 – 16, and 0.5 person of members at the age of 17 – 25.

66 Regarding current attendance rate for primary and secondary schools, 86% of female and 100% of male school age for primary and secondary schools (Age 7 – 16) members attend schools in the participating households of the 5 subprojects. For school age for college and university (Age 17 – 25) members, 58% of females and 33% of males of the age attend the schools.

Table 13. Current Attendance Rate for Primary/ Secondary Schools and College/ University  
(person / HH, %)

	Batch 1									Batch 2						Average of 5 Subprojects		
	Nam Hao			Nam Ngene 2			Houay Bong			Nam Beng			Nam Ngaad			N=107		
	(N=15)			(N=14)			(N=25)			(N=29)			(N=24)			(N=107)		
	F	M	Total	F	M	Total	F	M	Total	F	M	Total	F	M	Total	F	M	Total
No of HH Members at Age 7 - 16	0.7	0.8	1.5	0.2	0.5	0.7	0.9	0.4	1.3	0.3	0.4	0.7	1.2	1.4	2.6	0.7	0.7	1.4
No of Attending at Primary / Secondary Schools	0.7	0.7	1.4	0.2	0.5	0.7	0.6	0.4	1.0	0.2	0.4	0.6	1.2	1.4	2.6	0.6	0.7	1.3
Attendance Ratio of Total (Age 7 -16)	100%	88%	93%	100%	100%	100%	64%	100%	75%	78%	100%	90%	100%	100%	100%	86%	100%	93%
No of HH Members at Age 17 - 25	0.0	0.1	0.1	0.0	0.0	0.0	0.5	0.8	1.3	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.5
No of Attending at Colledge / University	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.4	0.6	0.1	0.0	0.1	0.1	0.2	0.3	0.1	0.1	0.2
Attendance Ratio of Total (Age 17 -25)	-	100%	100%	-	-	-	45%	50%	48%	100%	-	100%	100%	100%	100%	58%	33%	42%
No of HH Members at Age 7 - 25	0.4	0.5	0.8	0.1	0.3	0.4	0.7	0.6	1.3	0.2	0.2	0.4	0.6	0.8	1.4	0.4	0.5	0.9
No of HH Members Attending at Schools	0.4	0.4	0.8	0.1	0.3	0.4	0.4	0.4	0.8	0.2	0.2	0.4	0.6	0.8	1.4	0.3	0.4	0.7
Attendance Ratio of Total (Age 17 -25)	100%	89%	94%	100%	100%	100%	57%	67%	62%	82%	100%	91%	100%	100%	100%	81%	80%	80%

## 5.2. Medical Care

67 All of participating households except one household had its members who had been to medical facilities in 2018. The patients in Nam Hao, Nam Beng and Nam Ngaad subprojects went to public hospitals, and those in Nam Ngene 2 and Houay Bong went public dispensaries. These medical facilities were chosen because they were inexpensive and relatively close to their home, ranging from 2 kilometers in Houay Bong subproject to 14 kilometers in Nam Ngene 2 subproject.

Table 14. Use of Medical Facilities and the Distance from the House (2018)

	Batch 1			Batch 2		Average of 5 Subprojects
	Nam Hao	Nam Ngene 2	Houay Bong	Nam Beng	Nam Ngaad	
	(N=15)	(N=14)	(N=25)	(N=29)	(N=24)	
Use of Medical Facilities in 2018	15HH (100%)	14HH (100%)	25HH (100%)	26HH (96%)	24HH (100%)	104HH (99%)
Hospital (public)	15HH (100%)	0HH (0%)	0HH (0%)	26HH (96%)	24HH (100%)	65HH (62%)
Dispensary (Souksala/ public)	0HH (0%)	14HH (100%)	25HH (100%)	0HH (0%)	0HH (0%)	39HH (37%)
Clinic (private)	0HH (0%)	0HH (0%)	0HH (0%)	0HH (0%)	0HH (0%)	0HH (0%)
Distance from the house	5.3km	14km	2km	13km	5km	7.6km

## 6. Outline of the Endline Survey

68 The purpose of the FFES Endline Survey is to grasp the data at the end of the FFES activities in order to evaluate the impacts of the activities in comparison with the data obtained in the Baseline Survey.



69 Regarding the data to be collected for the Endline Survey, the following items will be collected in a format in the questionnaire.

(1) Same survey items as the Baseline Survey: Basic info, agricultural and non-agricultural income, expenditure, education, and medical care.

(2) Loan amount and repayment amount (including interest) by village and activity

(3) Details of activity implementation for each household participating in FFES activities (in the case of livestock, loan amount, initial number of provided livestock, births, deaths, self-consumption, sales, number currently owned, cost by item for each year from 2019 to 2021, In the case of crop, loan amount, in-kind provision (quantity and amount for each seed, seedling, fertilizer, planted area, harvest and sales volume and amount for each season, cost by item)

(4) Continuity of activities after repayment of loans by 1st round households (Data of (2) will be collected in 2022 as well)

(5) Continuation of activities by 2nd round households

70 Analysis items of the End-line Survey are summarized as following.

(1) Profit derived directly from the implementation of FFES activities

(2) Cost-effectiveness per village and activity

(3) Percentage of income from FFES activities, impact on spending, education, and use of health services (correlation analysis)

71 The End-line Survey is consisted of 5 steps - 1) Preparation, 2) Field Survey, 3) Data input and compile, 4) Data analysis, and 5) Development of the Report, and scheduled to carry out from September 2022 to January 2023. The implementation schedule is shown in **Table 15**.

Table 15. Implementation Schedule of the End-line Survey

	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23
1. Preparation for Endline Survey					
(1) Preparation of ELS including Questionnaire	■				
(2) Preparation of Implementation (field planning, official letter, appointments)			■		
2. Implementation of Field Survey			■		
3. Data input and compile			■		
4. Data analysis			■		
5. Development of ELS Report					
(1) Development of Draft Report				■	
(2) Receive comments					■
(3) Development of Draft Final Report					■

■ International CD and gender specialist

■ National CD and gender specialist