

KINGDOM OF CAMBODIA
NATION RELIGION KING



Beneficiary Profile Report
Phoum II Indigenous Community, La Ork
Commune, O Chum District, Ratanakiri
Province



PROJECT IP: P171331

APRIL, 2023

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I. Introduction

1.1 LASED III in brief

1. Since 2008, the World Bank, through Land Allocation for Social and Economic Development (LASED) projects, have continuously supported the government Social Land Concessions (SLC) program to successfully pilot a more sustainable and transparent process of land allocation to poor people. In addition, these projects have also supported the development of rural roads, small irrigation systems, primary schools and health posts, while providing agricultural training and support for expanded farming services in order to promote the livelihood and economic development of the land recipients during the whole project.
2. The Land Allocation for Social and Economic Development, Phase III (LASED III) would follow a two-pronged approach: (i) consolidating through complementary activities the current SLC program under LASED II and expanding it into new SLC sites within the same provinces; and (ii) implementing an adapted approach into communities of indigenous peoples in new project provinces. The project would build on the successful and well-established procedures under LASED and LASED II for implementing SLC activities, but also adapt them to indigenous peoples' communities.
3. The project development objective (PDO) is to provide access to land tenure security, agricultural and social services, and selected infrastructure to small farmers and communities in the project areas. In addition, the project's key activities include social land concessions, indigenous community land registration, commune land use planning, physical infrastructure development, and support for livelihood development. LASED III is expected to contribute to poverty reduction, livelihood improvement and expansion of climate resilient road infrastructure.
4. The Land Allocation for Social and Economic Development, Phase III (LASED III) is the governmental project with a total budget of US \$ 107 million, funded by the International Development Association (IDA) through the World Bank (WB) of which US \$ 93 million and US \$ 14 million is a contribution from the Royal Government of Cambodia. LASED III has been implementing by the following ministries:
 - a) Ministry of Land Management, Urban Planning and Construction (MLMUPC) as the Executing Agency (EA), and
 - b) Ministry of Agriculture, Forestry and Fisheries (MAFF) as the Implementing Agency (IA).

5. Within their framework, the project would support: (i) about 15 Indigenous Communities (ICs) to carry out their respective Indigenous Communal Land Titling (ICLT) processes; (ii) about 30 ICs, that have completed their titling processes, with development activities; (iii) about 12 SLC new sites in both currently covered and new provinces for land allocation and development activities; and (iv) the current 14 SLC sites currently covered by LASED II with limited, discrete and complementary activities such as small-scale irrigation and agriculture access tracks across SLC sites. However, it is not likely that all the estimated 57 new sites and communities would be identified and fully delineated, and all potentially required reclassification and/or reallocation completed before the start of the project.
6. During the launching workshop¹ presided by **H.E CHEA SOPHARA**, Deputy Prime Minister, Minister of MLMUPC, and Chairperson of the LASED III, he has announced officially that LASED III will be lasting for the period of six years project, starting from October, 2020 until December, 2026. During the six years of the project, the MLMUPC and MAFF will execute the project in the geographical targeted with suitable land and location at 71 sites² of around 30,000 hectares (included 10,000 hectares of indigenous communities), wherein 26 sites are for social land concessions and 45 sites for indigenous communities with approximately 15,000 rural households will get direct benefit from LASED III.
7. LASED III would follow a two-pronged approach: (i) consolidating through complementary activities the current SLC program under LASED II and expanding it into new SLC sites within the same provinces; and (ii) implementing an adapted approach into communities of indigenous peoples in new project provinces. The project would build on the successful and well-established procedures under LASED and LASED II for implementing SLC activities, but also adapt them to indigenous peoples' communities.
8. The Project consists of following parts:

A. Component 1: Selection and Development Planning of Social Land Concessions and Indigenous Communal Land Titling

This component is planning to the provision of technical support for (a) processing applications for SLCs, including determination of land availability, carrying out environmental and social

¹ Launching workshop virtually dated on June 24-25th, 2021, organized by MLMUPC which has been participated from implementing ministry, governors of relevant provinces such as Ratanakiri (RAT), Mondolkiri (MKR), Stung Treng (STG), Thboungh Khmum (TBK), Kratie (KRT), etc. amounting more than a hundred participants.

² This amount will be flexible due to the actual implemented activities done by MLMUPC. The ICs is increased from 30 ICs to 33 ICs, so the total is 74 sites for both ICLTs and SLCs that will be implemented under LASED III.

assessment (ESA) and (commune) land use planning ((C)LUP)³; (b) processing and registration and completion of titling process; (c) planning of infrastructure and service investments in indigenous communities, through (i) participatory preparation of SLCs and ICLTs plans; and (ii) identification, prioritization, and planning for infrastructure investments; and (iii) processing of individual SLC land titling for eligible land recipients and ICLT for eligible indigenous communities.

B. Component 2: Community Infrastructure Development

According to the early preparation from the relevant execution ministries with the participatory preparation of WB team, this component is subjecting to the provision of economic and social community infrastructures investments in the sub-projects in the projects areas in: (a) transport connectivity, water supply and sanitation, school and health infrastructures; and (b) small-scale irrigation schemes.

C. Component 3: Agriculture and Livelihood Development

This component is mainly implemented by MAFF as implementing agency on the provision of: (a) settling-in assistance to new land recipients; (b) initial land preparation assistance including a first cover crop; (c) technical support for MAFF's implementation of the comprehensive agricultural services strategy; (d) technical and operational support for establishment and strengthening capacity of community groups; and (e) revolving funds (RF) to eligible community groups to scale-up local initiatives on enhanced productivity and incomes for farmers, mitigation and adaptation.

D. Component 4: Project Management, Coordination, and Monitoring and Evaluation

This component would ensure effective project management through the (a) carrying out of the day-to day implementation, coordination, and management of project activities, including planning and execution, financial management, procurement, internal and external audit, environmental and social impact management, monitoring, reporting and evaluation; and (b) strengthening the SLC and ICLT management information systems.

E. Component 5: Contingent Emergency Response

This component is provisioned of immediate response to an eligible crisis or emergency, as needed. The contingent emergency response component, with a provisional zero allocation, would

³ According to the sub-decree No.72 dated on June 05th, 2009 about the procedure of commune land use planning will be used as the tool to prepare on the land use planning. In addition, MAFF will conduct the agro-ecological analysis (AEA) onsite to randomly select the soil samples to analyze the physical and chemical assessment for suitable agricultural land usages and zoning.

allow for the reallocation of financing to provide immediate response to an eligible crisis or emergency. An Emergency Response Manual (ERM) is included in the PIM which will describe implementation arrangements for the component, including its activation process, roles and responsibilities of implementing agencies, positive list of activities that may be financed, environmental and social aspects, and fiduciary arrangements.

9. Principally, LASED III's geographically targeted shall be operated throughout the whole country, where Phnom Penh capital city is not included, according to the demand driven approach adopted for the SLC and ICLT. However, current agreement with authorities limits the project's coverage to the 14 provinces⁴ that would host about 71 sites and IP communities. In addition, to choose the beneficiary targeting, the approach to the delivery of LASED III relating to SLCs and ICLT⁵ is applied based on "demand-driven". For instances, the allocation of both SLCs and ICLTs is commune-based or ICs-driven, rather than pre-determined by the project. Table 1.1 below shows about the beneficiary targeting of both SLC and ICLT.

Table 1.1 Beneficiary targeting				
SLC/ICLT	SLC’s support		IP’s supports (ICLTs and ICs)	
			Development support to already titled ICs	Titling - ICLTs
	Existing	New	(targeted)	(targeted)
	14	12	30 (+3)	15
Total	26		45	
Grand total	71 (+3)			
Source: PIM, 2022.				

⁴ Such as Ratanakiri, Mondolkiri, Stung Treng, Kratie, Kompong Thom, Preah Vihear, Thboun Khmum, Kompong Speu, Odormeanchey, Banteaymeanchey, Siem Reap, Battambang, Kompong Chhnang and another one will be done soon according to the proposed site location from the local governor of available land to join with the project.

⁵ **ICLT Eligibility:** According to the Article 23 of Land Law 2001, the eligible criteria for starting the process of ICLT include a group of people who share ethnic, social, cultural and economic characteristics and cultivate their land in a collective manner. In addition, the Circular 0974/09 of the Ministry of Rural Development made specific criteria that 1) they manifest their self-identity which is recognized by the local authority; 2) they have their own speaking or written language, even that has disappeared; 3) There are traditional leaders including elders, tribal leader, or an existence of traditional decision making structure; and 4) there are five different types of community land including spirit forest land, burial ground, swidden land or reserve land, actual land area for cultivation, and residential land. In addition, the well ranking of the IC applicants would also include the requirement of having community by-laws, composition of the Community Committee, and the IPC Internal Rules accommodate inclusion of women and youth in decision making.

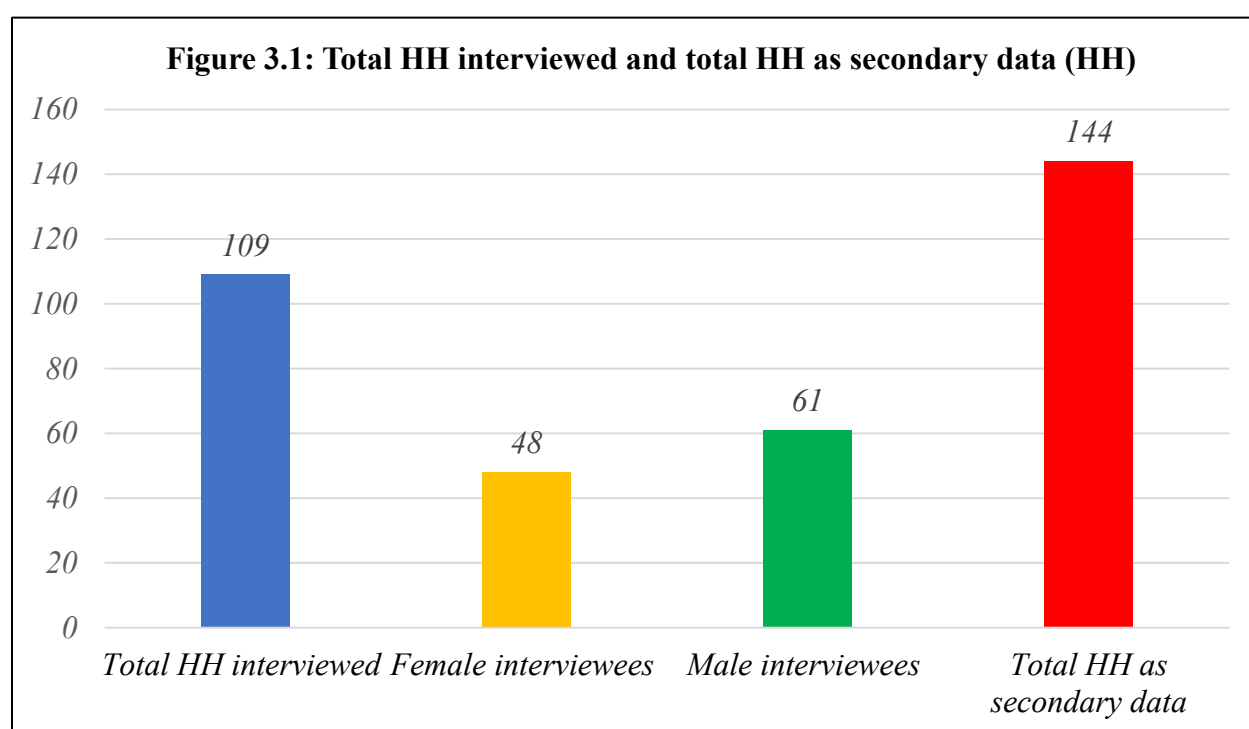
II. Data Collection Methodology

10. This study is divided into two phases in order to collect the data and information regarding to the targeted indigenous communities such as (i) secondary data sources collection is provided by the local authorities through the implementing officials of LASED III under provincial Department of Agriculture, Forestry and Fisheries (PDAFF) includes the total households (HHs), number of the population inside the village and community (included males, females and children, etc.), and (ii) primary data sources collection is gathered from the interview during the mission at the communities directly by using the prepared questionnaires (See the annexes).
11. Practically, the method used to collect the data and information of beneficiaries includes the organizing the orientational extensively meeting to introduce the objectives of the project, the purposes of the mission and mission team members in order to provide the information to the participants understand of the mission then arranging the interview of each participant. After that, the mission team will go directly to interview the rests who do not participate at every household remained. In order words, there are two different ways of interviews such as (1) individual and (2) group interviews in order to make every interviewee to be isolated without disturbing from another people or to ensure they are free at talking.
12. The mission was conducted provincially in **Phum Pir indigenous community/village, L'ak commune, Ou Chum district, Ratanakiri province** from **20 to 24 March 2023** led by Mr. Phon Reno, a member of agro-industry sub-component and participated by other relevant technical sub-component under LASED III project as well as the implementing agency at sub-national officers under Ratanakiri PDAFF.

III. Results

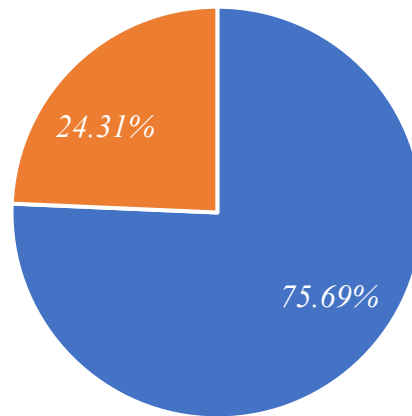
3.1 General Information

13. **Phum Pir indigenous community** is a village located in **L'ak commune, Ou Chum district, Ratanakiri province**, standing at north-east side, about **25 km** from **Banlung town**. The majority of citizens of this village are **Kreung Indigenous People**. Kreung tribe is matrilineal descendent. Villages are usually governed by a council of local elders or by a village headman. Geographically, its location is UTM 48 P 722491 1531469.
14. According to the secondary data from village chief of **Phum Pir village**, the total population inside this village is 549 IPs (Includes 265 females and 284 males) equals to 144 households (HHs). However, once the mission team has completely interviewed all families in **Phum Pir village** there are totally about 109 HH (F 48; 44.06%, M 61; 55.96%) (See figure 3.1 below).



15. Therefore, the percentage of the households interviewed is approximately 75.69% of the total family in **Phum Pir indigenous community** or **Phum Pir village** while there are only 24.31% were not interviewed (See figure 3.2 below).
16. Geographically, L'ak is a commune in Ou Chum District in north-east Cambodia. It contains five villages and had a population of 1,348 in 1998. In L'ak commune consists of five villages such as L'ak, Kralong, Kouk, Kam, and Phum Pir village.
17. In fact, Ou Chum is a district located in Ratanakiri Province, in north-east Cambodia. In 1998 it had a population of 11,863. It contains 37 villages, which are located in seven communes such as Cha Ung, Chan/Pouy, Aekakpheap, Kalai, Ou Chum, Sameakki, and L'ak commune.

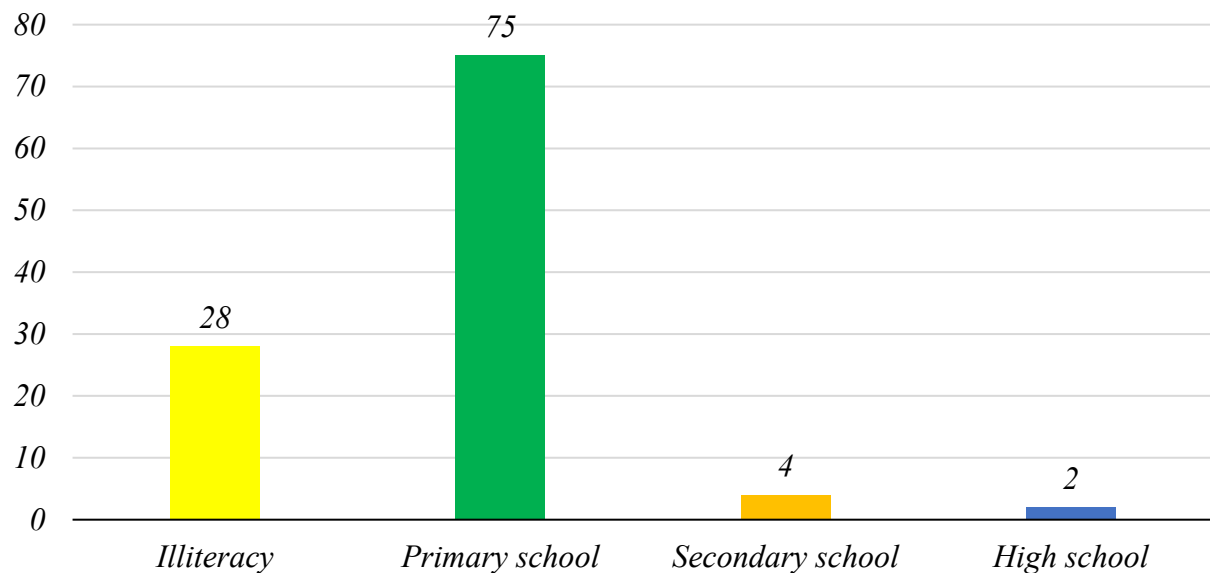
Figure 3.2: Percentage of HH interviewed VS Non-interviewed (%)



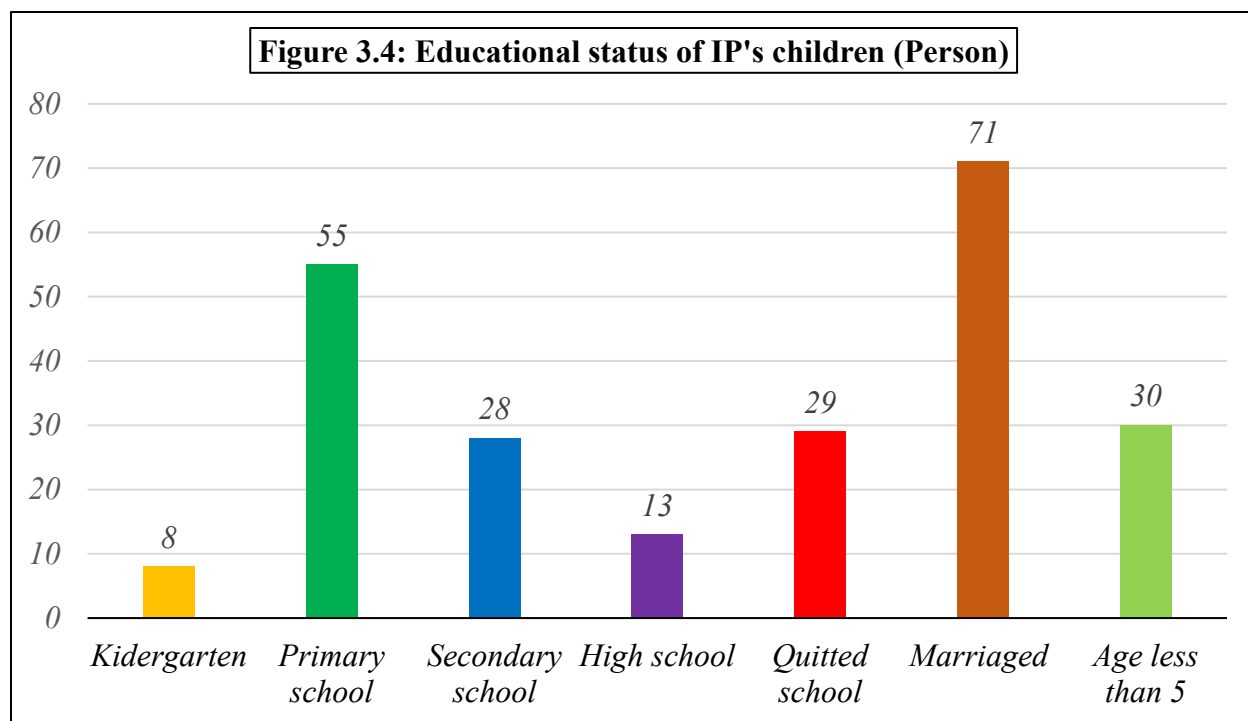
■ HH Interviewed ■ HH Non-interviewed

18. According to the data interviewed, the educational level of interviewees at illiteracy, primary school, secondary school, and high school rate is about 68.80% (75 Pers), 3.67% (4 Pers), 1.87% (2 Pers) and 25.70% (28 Pers) respectively (See figure 3.3: Interviewees' educational level).

Figure 3.3: Interviewees' Educational Level (Person)

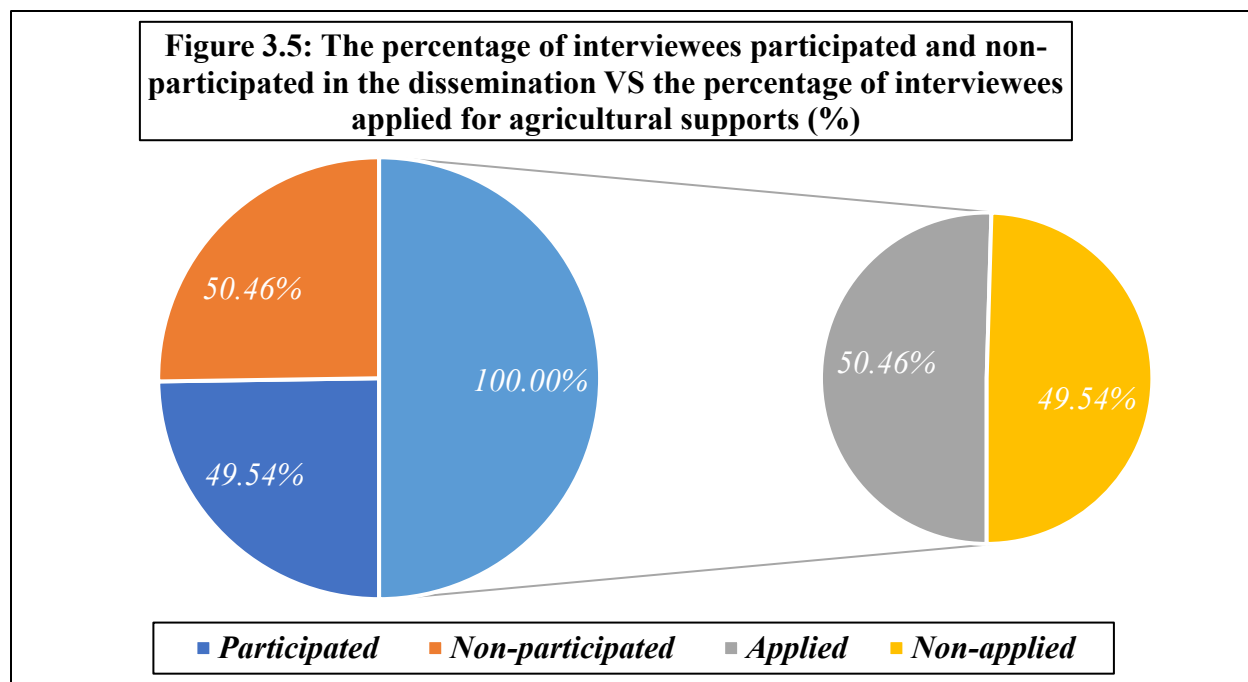


19. Based on the interviewed data, there are approximately 234 IP's children which consist of 105 and 129 of girls and boys, respectively. At the same time, those children are mostly studying at primary school, some at secondary school and some at secondary school and high school inside and outside the village. By the way, there are approximately 42.74% of those children were quitted the school and got marriage already (See the figure 3.4) while there is no either technical school or university student.



20. Since early year of starting the LASED III project, the MAFF team has already organized the dissemination among them so that **Phum Pir village** has intentionally applied for agricultural supports since 2021. However, during the dissemination, some of IPs did not join because of some reasons related to their personal daily works, his/her family joined instead of them so that once the interview they have mentioned it. In fact, there are more than 49.54% of the total IP has been participated the dissemination days conducted by MAFF, PDAFF, MLMUPC, etc. However, during the interview, it is shown that the percentage of the interviewees responded that they have rationally applied for the agricultural supports with MAFF or PDAFF team is representatively almost 50.46% of the total interviewees. So, it means that they are willing to get more technical supports from MAFF on economic and livelihood development to promote their daily life. According to the interview, the technical supports in term of agriculture are raising animal (Chicken, duck and cow), aquaculture (fish raising), crops farming especially industrial crops such as cashew nut and cassava production, horticulture (safe vegetable farming, organic farming and fruits), contract farming and markets linkages training, agricultural processing techniques, nutrition sensitive agriculture, food safety, producers group establishment and other related technical supports (See Figure 3.5 below).
21. Essentially, agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. These services involve the planning, organizing, directing and handling of agricultural produce in such a way as to satisfy farmers, intermediaries and consumers. In addition, numerous interconnected activities are involved in

doing this, such as planning production, growing and harvesting, grading, packing and packaging, transport, storage, agro- and food processing, provision of market information, distribution, advertising and sale. Effectively, the term encompasses the entire range of supply chain operations for agricultural products, whether conducted through ad hoc sales or through a more integrated chain, such as one involving contract farming.



22. Rationally, even though the interviewees' answers had joined the dissemination day not hundred percent but they are willing to welcome the LASED III project inside the **Phum Pir village** largely as indicated in the agricultural support application requested.
23. Recently, the infrastructures inside **Phum Pir village** include the earth roads and laterite roads, approximately 2.0 km and there is the DBST road about 0 km. Regarding to the water sources, there is the stream about 5 km length. Some of the people inside the village used to catch fishes traditionally in this stream. For the educational infrastructure, there is one building of primary school named **Primary School Phum Pir** and there is also an indigenous community headquarter/community office. As per observation, there are two buildings of health post located not in this village where they have to travel about 5 km from the village to get the health services at the health post near L'ak office.
24. Additional remarks to the infrastructure: infrastructure enables economic growth and it is essential to a domestical and regional economic development. It allows for business operations, provides jobs; for instances the local teachers; and promotes the exchange of goods and services.



Photo 3.1: Physical Infrastructure of Phum Pir village



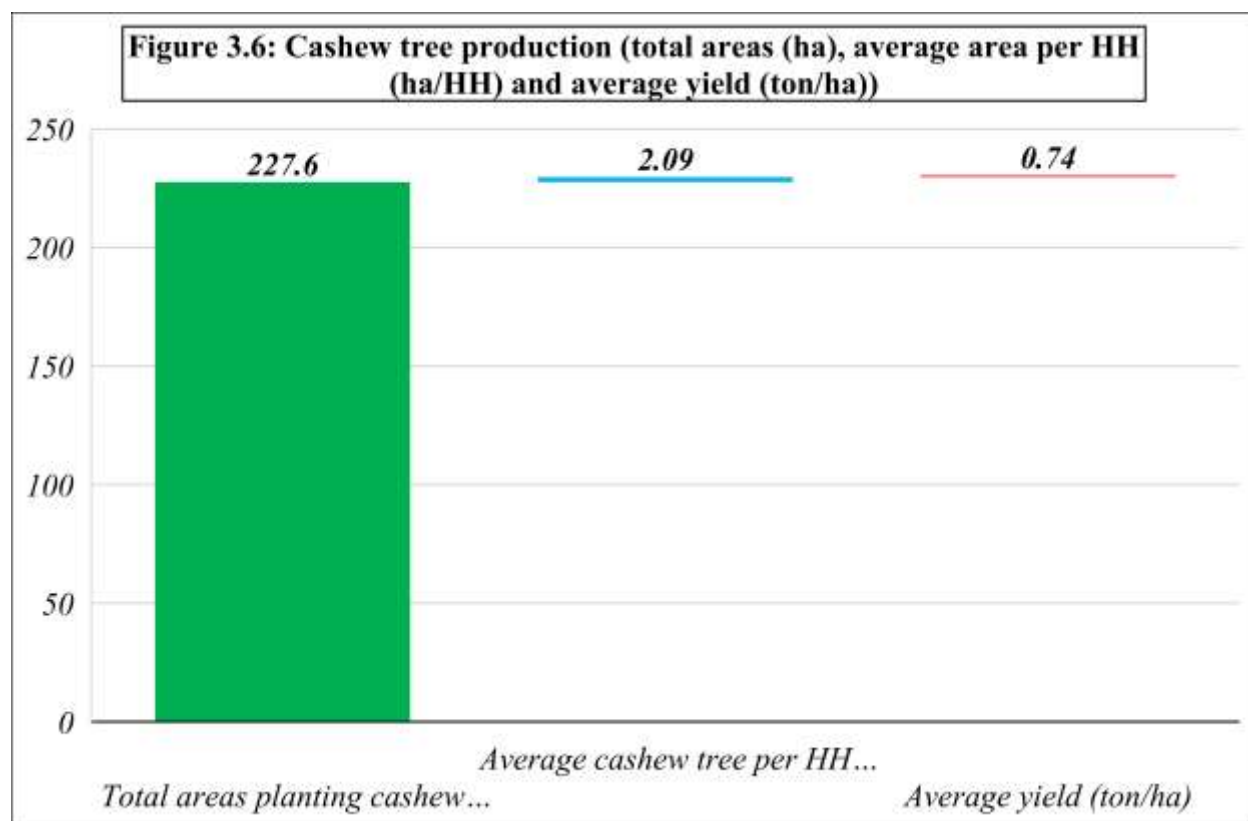
Photo 3.2: Daily Life of Phum Pir IC

25. If we look at daily life and livelihood in general, the people in the indigenous community of **Phum Pir village** have been engaged in agriculture, including the cultivation of industrial crops (cashew and cassava), paddy/rice, vegetables, raising animals (mostly cattle, mice pigs and chickens), fishing traditionally in the stream, beside that they are selling the labor force to moving grass, pick the cashew nut, clearance the forest, collect the rubber resin, Khmer traditional medicine, selling groceries, food and other materials, and construction in and outside the village, handicraft, teachers, dig a well for the people inside the village, harvest the cassava, etc. Additionally, there are about 237 labor forces in agricultural sector.

3.2 Crops Production Potential

3.2.1 Cashew Tree Production

26. According to the interview of all 109 HHs, it is indicated that total areas of cashew tree plantation is approximately 227.60 ha which means that there is approximately 2.09 ha per household in average. For the cashew tree's age is between 4 years old to 20 years old only. In 2022, the total cashew tree harvested areas was almost 100.00% of total planting areas which its yields harvested were approximately 167.45 tons. So, the average yield is approximately 0.76 tons per hectare. Economically, they sold the cashew nut with minimum prices and maximum prices 2500 and 4200 riels, respectively. For details of every household who plants cashew tree is attached in the annex 3.6 below of this report.



27. According to the Cashew nut Association of Cambodia (CAC) president Uon Silot said there are several varieties grown in Cambodia – M1 or SM1, M23, IM4, M10, H09, M7 and SAN1. Of these varieties, M23 is the most cultivated, accounting for more than 60 per cent of the total area dedicated to cashew farming. In addition, according the Cambodian Cashew Nut Association (CAC), the average yield of cashew nuts is 1 to 1.5 tons per hectare, depending on soil quality, cultivation and crop maintenance as well as cashew variety while some areas can yield up to 3 tons per hectare. Seasonally, the cashew harvest season usually begins in February

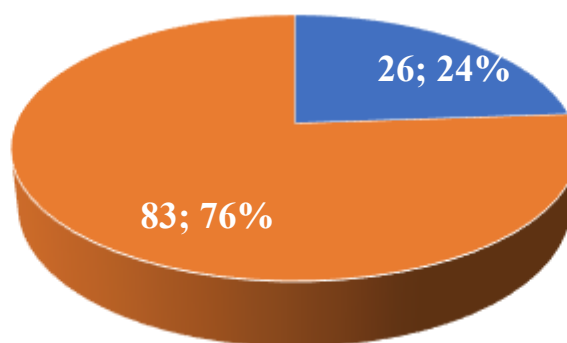
and lasts until the end of May, annually. Naturally, the cashew tree planted by its nut will be released the blossom of flowers at 3 to 5 years old.

28. It is true that cashew nuts during the early harvest season get better prices. In recent year, cashew nuts currently cost 5500 riel per kilogram, while prices fluctuate. The price of last year's harvest started from 6000 riel per kilogram. However, the current price is still good if farmers follow the standard of care. In these few years ago, "despite the challenges faced by the Covid-19 pandemic, farmers can still get between \$ 1500 and \$ 2000 per ton," according the CAC, and "prices can drop to \$ 1 per kilogram, but farmers can still make a profit". Recently, most of the cashew nuts grown in the Kingdom of Cambodia are M23.

3.2.2 Cassava production

29. There is only 26 HHs that have just have been cultivated the cassava which estimated approximately 38.40 ha. In fact, there are more reasons included lack of varieties of cassava resistance with diseases, lack of NGOs and public sector support on its farming technique and other supports, no cultivation land, etc. On the other hands from the previous experiences, cassava is the second main economical crop among other indigenous communities to be grown annually. Normally, its yields were sold into two different forms includes (i) fresh cassava chip and (ii) dried cassava chip with following prices 600 riels per kilogram and 800 riels per kilogram, respectively. For details of every household plant cassava is attached in the annex 3.7 below.

Figure 3.7: The amount of HH planting and non planting cassava (HH, %)



■ Amount of HH plant cassava ■ Amount of HH no plant cassava

30. Normally, the yield of cassava is between 15 and 25 tons per hectare while some areas its yield is 35 tons per hectare. According to the news released by ministry of commerce, in December 2021, the average price of dried cassava was between 786-869 riel per kilogram, while in December 2020 it was 667-875 riels in some areas of Cambodia. In addition, fresh cassava

costs 260-360 riels, compared to 267-363 riels. Last year, in some areas, the price of fresh cassava was 310 riel and dried cassava was 810 riel per kilogram.

31. In addition, as per previous research shown that the moisture content on a wet basis of freshly harvested cassava roots can vary in the range 62.5–75.4% (Kajuna et al., 2001; Mlingi, 1995⁶). Actually, Cassava roots tend to develop water-soaked tissues and begin to deteriorate rapidly.

3.2.3 Rubber Production

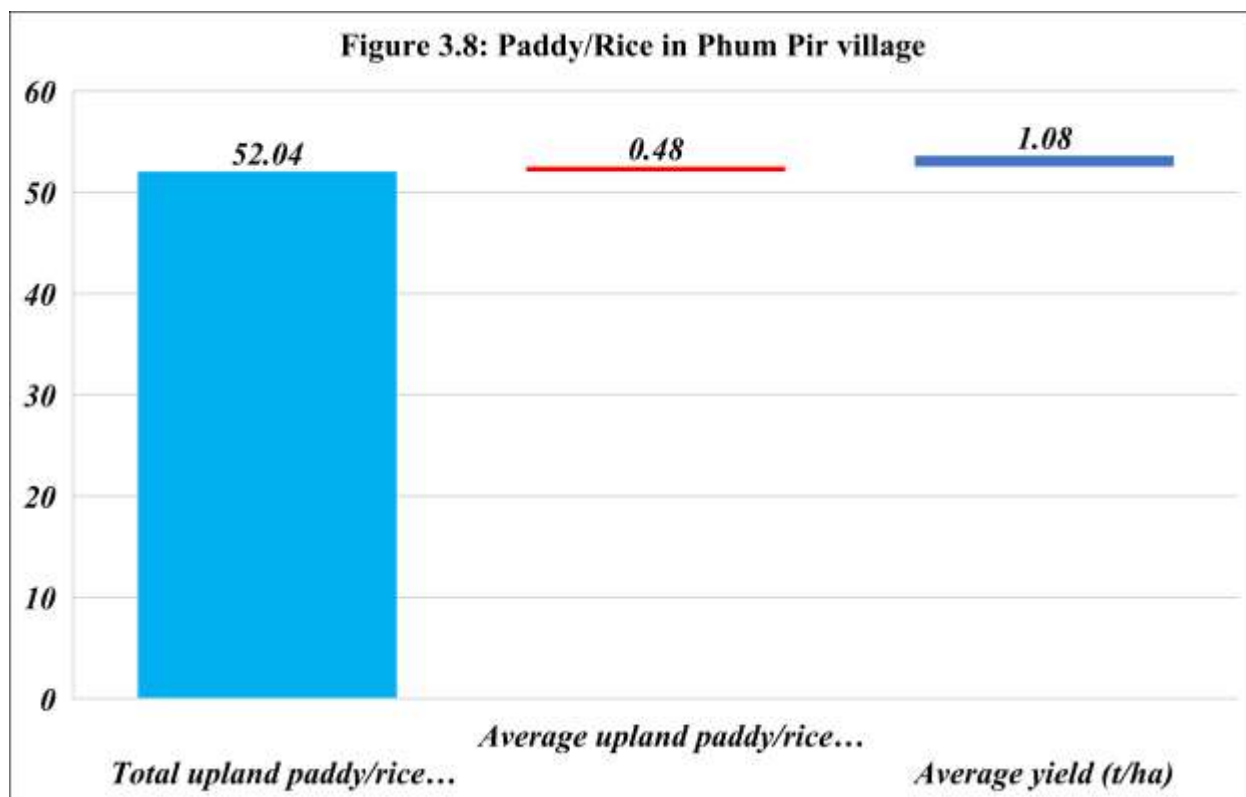
32. As per interviewed, **Phum Pir village** has about 12 HHs who have cultivated the rubber tree around 28.50 ha and its total yield is around 10.04 tons. However, according to the planting techniques indicated in the report of General Directorate of Rubber shows that an average of rubber resin between 1920-2015 is approximately 1.141 tons/ha. In addition, the price of wet rubber resin they sold is about 2 500 riels per kilogram. In 2021, the price of dried rubber resin was 1 685\$/ton, according to MAFF's report.

3.2.4 Paddy/Rice Production

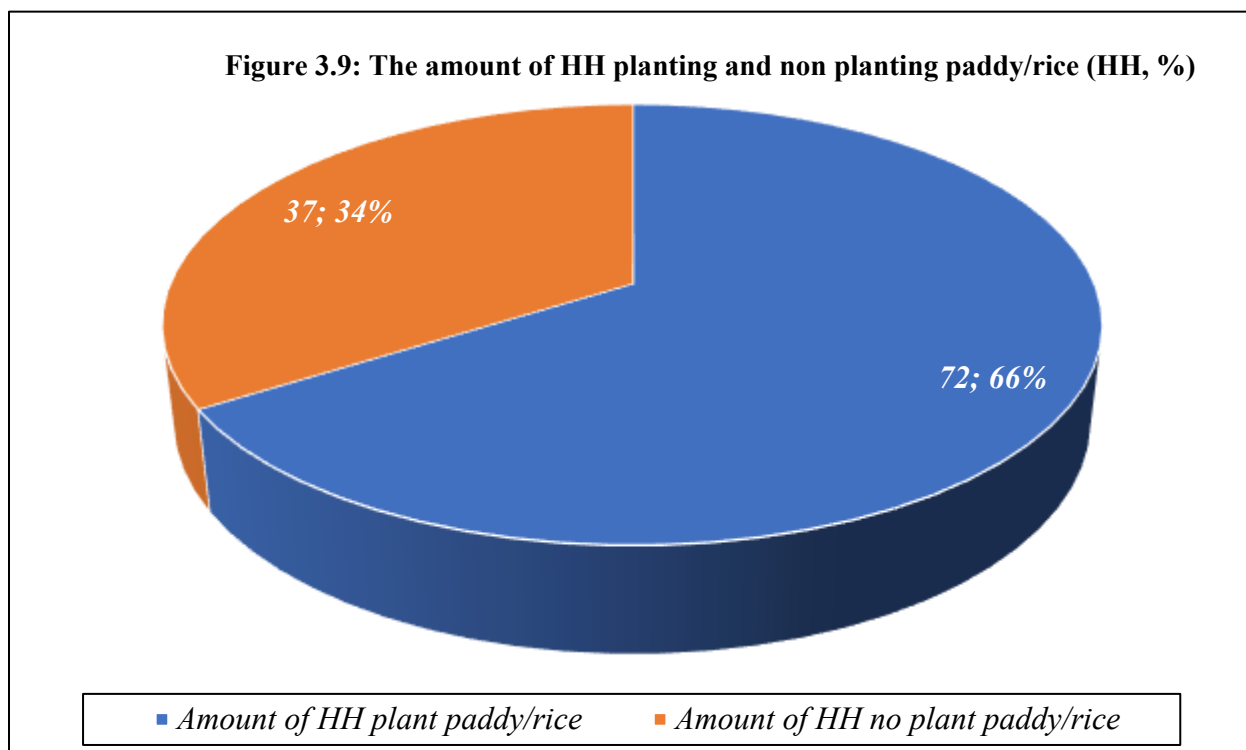
33. Besides growing cashew, cassava and rubber, there are approximately 52.04 hectares of paddy/rice production (Rainy season paddy/rice) with the total quantity yields around 61.57 tons equally of both traditional planting method (upland rice) and there are only 37 interviewees mentioned that they do not cultivate rice crops because of several reasons.
34. According to the figure 3.8 below shows that an average of upland paddy/rice area and an average of upland paddy/rice crop of the ethnic people are approximately 0.48 ha per HH and 1.08 ton/ha, respectively.
35. In addition, according to the General Directorate of Agriculture's report in 2022, paddy/rice yield for Cambodia was 3.42 tons per ha⁷.

⁶ Pornpraipech, P., Khusakul, M., Singklin, R., Sarabhorn, P. and Areeprasert, C., 2017. Effect of temperature and shape on drying performance of cassava chips. *Agriculture and Natural Resources*, 51(5), pp.402-409. Available at: <https://doi.org/10.1016/j.anres.2017.12.004>.

⁷ The General Department of Agriculture stated that in 2022, rice cultivation spread over 3.40 million hectares, which is equivalent to 110.40 percent of the annual plan, with a total yield of 11.62 million tonnes.



36. According to the interview and it is mentioned in the figure 3.9 below, it is shown that 37 HHs among 109 HHs have not planted the rainfed upland paddy/rice crop while other households have been cultivated the paddy/rice traditionally with protective habits. However, some of them have expressed their mindset to update their practical in agricultural activities to increase the yields too.



3.2.5 Horticulture Crop

37. Vegetable is one among other edible crops of horticulture crop which is very essential for well-being consumption as foods and sources of trace elements required for human metabolism processes. According to the interview of all 109 HHs in **Phum Pir village**, it is found that there are few households cultivating the vegetables. However, the fruits tree is planting in the village too such as jackfruit tree, coconut, mango, lemon, etc. In addition, for related herb and spices, it is found that they are growing lemongrass leaves, turmeric, tamarind, basil leaf hot, basleaf, cucumber, red chili, spring onion, eggplant, small chili red, small chili green, papaya, galangal, turmeric, turmeric white, Khmer plai, sweet potato, pumpkin, bitter melon, morning glory, etc.

3.2.6 Impacts on Crop Production

3.2.6.1 Soil Fertility

38. Soil fertility and plant nutrition encompasses the management of essential elements necessary for plant growth, typically to achieve selected management objectives even though soil fertility plays a vital role in natural systems of plant production for human uses (e.g., food, feed, fibre, energy, and landscape esthetics)⁸. An element is considered essential if it is required for plant metabolism and for completion of the plant's life cycle⁹. Typically, 17 elements are considered to meet these criteria and they are divided into macro-nutrients and micronutrients.

39. According to the interview on the soil fertility of this village, it is found that the soil status is considerably medium condition. If we look into the yield of crops inside the village, we can see that the yield is extremely higher than some other areas. In addition, it is answered that they spent less than 1,000,000.00 riels to cover on the agricultural inputs.

3.2.6.2 Challenges

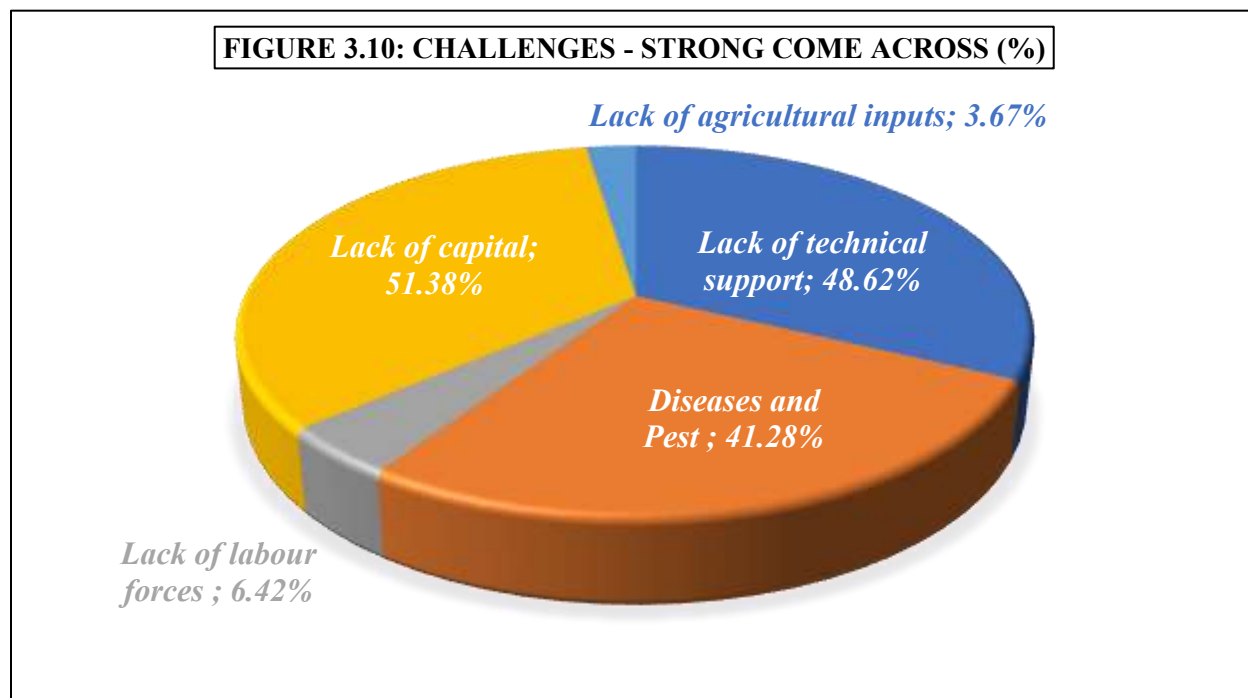
40. In order to get to know the existing challenges among the ethic people of **Phum Pir village**, the ranking/rating questions¹⁰ is used to gather the information from the respondents. In this

⁸ McGrath, J. M., Spargo, J., & Penn, C. J. (2014). Soil Fertility and Plant Nutrition. In Plant Health (pp. 166-184). Elsevier. <https://doi.org/10.1016/B978-0-444-52512-3.00249-7>.

⁹ Havlin, J.L., Beaton, J.D., Tisdale, S.L., 2005. Soil Fertility and Fertilizers: An Introduction to Nutrient Management. Upper Saddle River, NJ: Pearson Prentice Hall. Epstein, E., Bloom, A.J., 2005. Mineral Nutrition of Plants: Principles and Perspectives. Sunderland, MA: Sinauer Associates.

¹⁰ Rating is a commonly used traditional method of performance appraisal. Under this approach, an employee is numerically rated from either 1-10 or 1-5 on various job performance criteria like attendance, attitude, performance, output, sincerity, dependability, initiative, etc.

beneficiary profile survey, it is rated from 1-5, starting from “never come across” to “strongly come across”, respectively, by using **Likert scale measurement**¹¹.



41. Figure 3.10 above is showing that among the total of **PIP** in **Phum Pir village**, there are approximately 48.62% (53 HHs), 41.28% (45 HHs), 3.67% (04 HHs), 6.42% (07 HHs), and 51.38% (56 HHs) have been slightly come across several challenges such as lack of techniques, pest and diseases, lack of agricultural inputs, lack of labour forces, and lack of capital, respectively.

3.2 Animal and Husbandry Production Potential

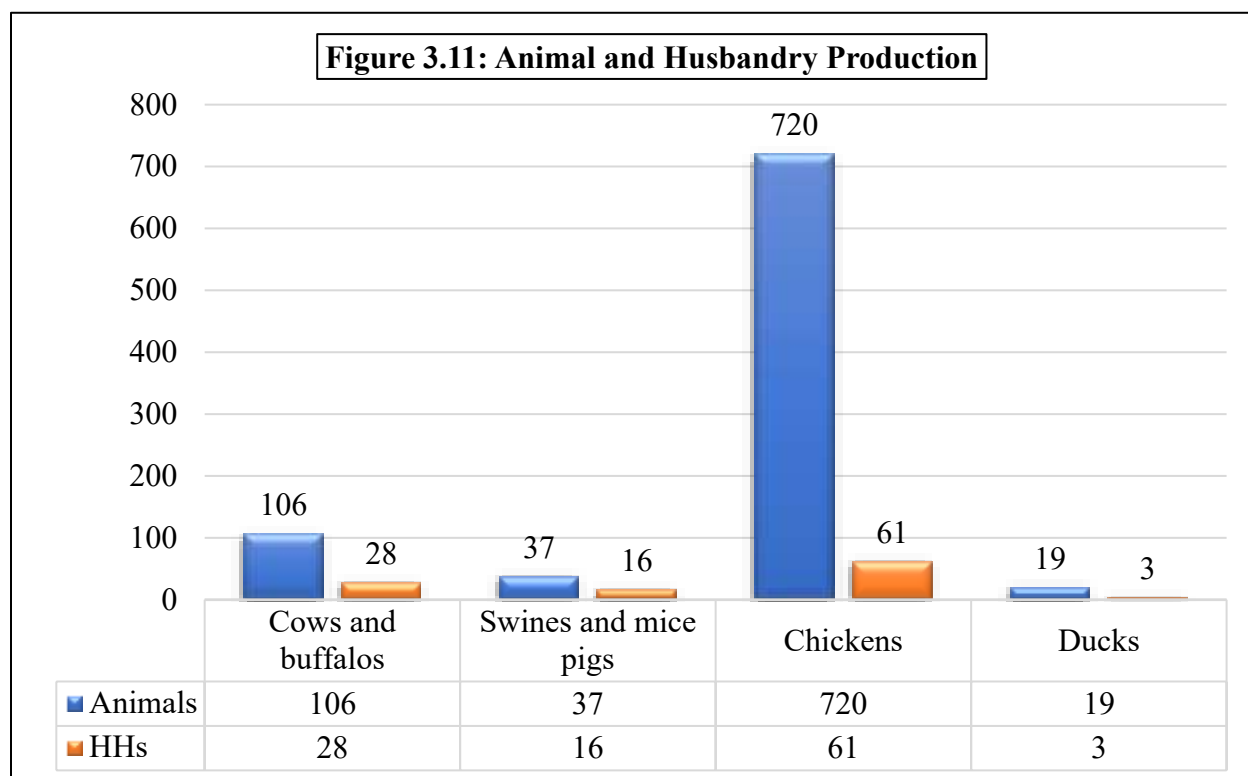
3.2.1 Animal Production Statistic

42. According to the interview with all 109 HHs in **Phum Pir village**, it is found the potential of animal production and husbandry as well. Moreover, the poultry and husbandry production totally are approximately 882 animals which divided as below figure 3.11.
43. According to the interview with all of 109 respondents, it is found that the turnover into their family’s economic from the animals and husbandry production is assumed approximately 13,860,000.00 riels (Equals to 3,352.69 USD¹²) as expressed into the animals’ categories of

¹¹ A Likert scale is a type of rating scale, often found on survey forms or questionnaires, that measures how people feel about something which can be useful in many different situations. A Likert scale, named after its inventor, the American social scientist **Rensis Likert**, is the most widely used psychometric approach to ask the audience about their opinion or feeling in survey research using usually 5 or 7 answer options range. Respondents can give a negative, neutral or positive response to a statement.

¹² Exchange rate: https://www.nbc.gov.kh/download_files/economic_research/off_ex_rate_kh/oer_08-08-2023.pdf.

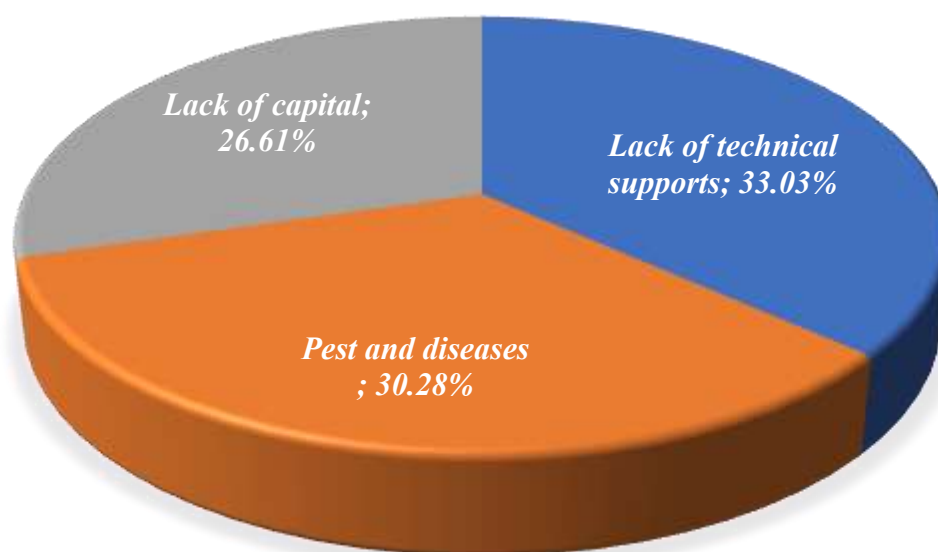
cows and buffalos (10,500,000.00 riels or 2,539.91 USD), swines and mice pigs (2,000,000 riels or 483.79 USD) as well as chickens and others (1,360,000.00 riels or 328.98 USD) while the production's expenditure is about 4,370,000.00 riels or 1,057.09 USD.



3.2.2 Challenges

44. As mentioned in the paragraph 40 above, Likert scale measurement is used to rate the perceptions of all respondents in **Phum Pir village** in terms of animal production's challenges occurred previously among their families. Logically, it is rated from 1-5, starting from "never come across" to "strongly come across", respectively.
45. Figure 3.12 below is showing that among the total of Prov ethic people in **Phum Pir village**, there are approximately 33.03% (36 HHs), 30.28% (33 HHs), and 26.61% (29 HHs) have been strongly come across several challenges such as lack of techniques, pest and diseases, and lack of capitals, respectively. From this result, animal production and husbandry are mostly facing with technical constraint. Therefore, it is good to support them with suitable production.
46. Disease must be controlled whether it is affecting a pet or an entire flock of animals. A small outbreak of disease can spread and hinder the entire population. Quick detection and diagnosis can help prevent further spread. In addition, direct causes of disease are: (1) bacteria, (2) viruses, (3) parasites, (4) fungi, (5) nutritional deficiencies, (6) chemical poisons, and (7) unknown causes. Infectious diseases are the greatest threat to livestock health.

FIGURE 3.12: CHALLENGES - STRONG COME ACROSS (%)



3.3 Fishery and Aquaculture Potential

3.3.1 Traditional Fishery¹³ Practices

47. According to the interview with all of 109 respondents, it is found that there are approximately 13 HHs equals to about 11.93% used to fish or fish traditionally inside their village. Significantly, they totally spent on average about 150,000 riels of all fishing families on the fishing materials for traditional fisheries. However, none of them used to do aquaculture in the village, according to the interview.

3.4 Agricultural Cooperative, Producer Group and Revolving Funds Group

48. According to the interview, it is found that there is neither agricultural cooperative nor producers groups establishment in **Phum Pir village**. However, once the team asked them about the establishment of producers group on cashew, cassava, rice, etc. they expressed to form up it in terms of market linkages with buyers.

¹³ Traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels, making short fishing trips, close to shore, mainly for local consumption. In some communities, traditional fishing community is a defined group of people who share identity and attachment toward one another and interact on an ongoing basis to perform activities along the fisheries value chain based on experiential knowledge accumulated over time and passed along generations (Berkes 2001; Johannes 2003; McGoodwin 2001).

3.5 Markets and Markets linkages

3.5.1 Contract Farming Implementation

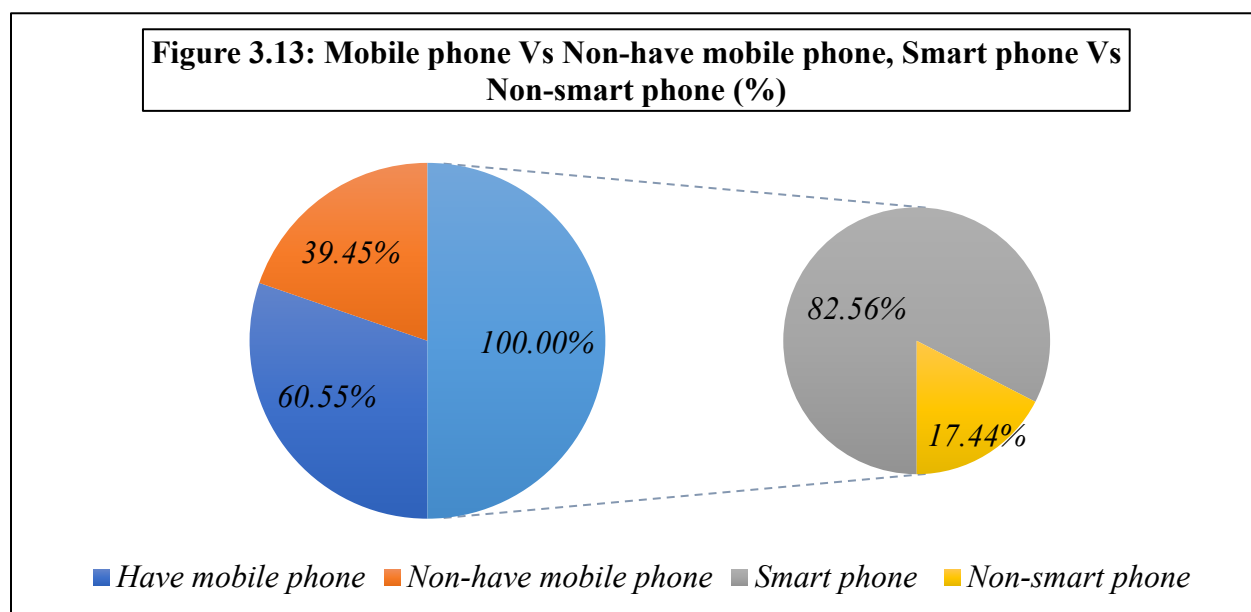
49. As per interview all of them, it is found that both simple contract application and formal contract farming implementation are not applied yet in this **Phum Pir village**. In addition, either the training or orienting forum has never provided by both national institutions and PDAFF itself. Therefore, they should have been encouraged to be well disseminated about relevant legal documents of the contract farming implementation mechanism in terms of markets linkages promotion to direct buyers domestically.

3.5.2 Existing Markets

50. Nowadays, they are selling their agricultural products to the domestic middleman who have been collected the products to sell to the processing companies at the town and to the middleman of the neighbouring countries. As their practices, the middleman comes to pick up the cargos to their either warehouses or companies directly. In addition, some of them are selling their produces by themselves inside the village by using their own vehicles.

3.6 Extension and ICT

51. According to the interview, it is found that there are approximately 66 HHs equals to about 60.55% who have had the mobile phones while about 43 HHs equals to 39.45% do not have the mobile phone. Totally, their mobile phone is calculated approximately 86 phones while it is estimated about 71 smartphone equals to 82.56%. Figure 3.13 below shows about the mobile phone utilization in **Phum Pir village** as per all 109 respondents interviewed.



52. However, there are approximately 31 respondents equals to 28.44% had used their mobile phones to either search or watch the videos related to the agricultural extension programs; such

as crops farming, aquatic application, animal and livestock raising, etc.; even though they have used mobile phone individually. In addition, they also search for the market application such as *CamAgriMarket app, Tonle Sap Mobile app, Chamka Mobile app, etc.*

53. By the way, according to the interview, it is found that there are more than 89.07% (96 HHs) who did not attend the training provided by either NGOs or governmental agency while there approximately 11.93% (13 HHs) who used to attend the training. The trainings covered on the technical crops farming and compost fertilizer making, fish aquatic farming and livestock farming.

3.7 Economic Analysis¹⁴

3.7.1 On Farm Incomes

54. According to the interview of all 109 HHs, it is found that a huge income of villager in this villages come from agriculture farming activities. In fact, the total revenue from agricultural products sold last year based on the interview was approximately 632,622,500.00 riels equals to 153,029.15 USD while it is also found that the production cost on agricultural farming is approximately 139,320,000.00 riels equal to 33,701.02 USD.

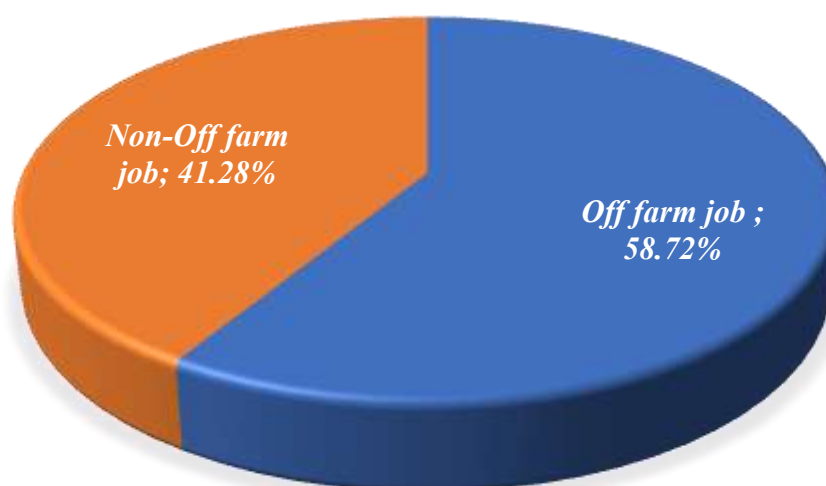
3.7.2 Off Farm Incomes

55. By the way, besides agriculture farming activities, it is found that there are about 58.72% (64 HHs) have been working in other sector assumed as non-farm jobs¹⁵ while there are about 41.28% (45 HHs) mentioned that they did not get the non-farm jobs as stated in Figure 3.14 below. According to the interview, the total revenue earns from non-farm job accounts approximately 290,260,000.00 riels equal to 70,212.87 USD.

¹⁴ Economic analysis essentially entails the evaluation of costs and benefits. Economic analysis helps us to make decentralized decisions on the appropriate choices between competing uses of resources, with costs and benefits being defined and valued so as to measure impacts of the projects on the broad development objectives of the country. (Source: Edomah, N., 2018. Economics of energy supply. Reference module in earth systems and environmental sciences, pp.1-16.)

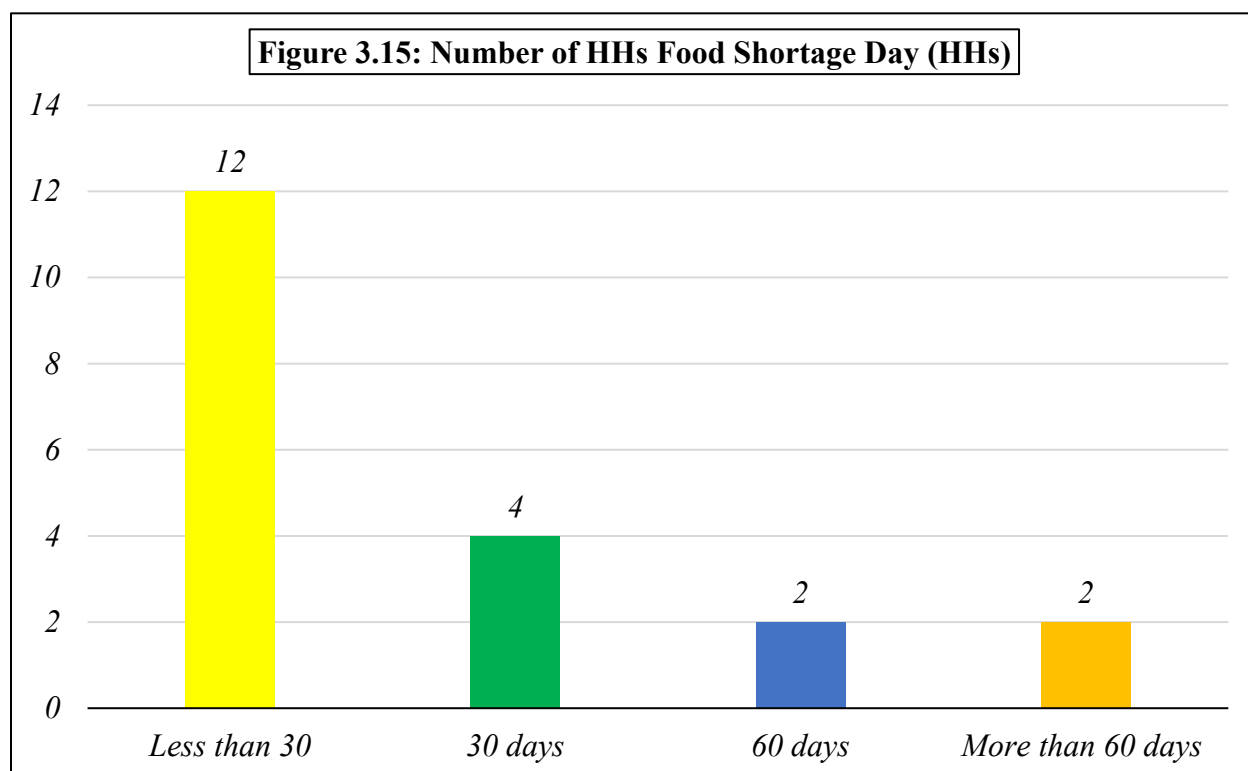
¹⁵ According to the non-farm jobs and incomes were selling labor to cut the farm grasses, commune clerk, village chief, commune councilor member, weaving traditional consumption materials such as Kapa for sale, wine jar making, find non-timber forest products, assist the tourists to visit the natural tourism at *Vireak Chey national park*, boat transporter, selling foods and other using materials, construction workers and the gift provided by their marriage children.

FIGURE 3.14: OFF FARM AND NON-OFF FARM JOB (%)



3.7.3 Household Food Security (HFS)

56. Household food security can be defined as a household having assured sets of entitlements from food production, cash income, reserves of food or assets and/or government assistance programmes such that in times of need they will be able to maintain sufficient nutritional intake for physical well-being. Recently, sustainable food system is a type of food system that provides household food consumption more efficiency in terms of food security and nutrition.
57. Food security occurs when all members of a household at all times have reliable access to food in sufficient quantity and quality to support an active and healthy life. While food security involves food availability, accessibility, utilization and stability, the majority of attention appears to be focused on the increasing number of foods in India that are available yet inaccessible to the population.
58. Regards to status of food security of this village, it was recorded 11.01% (12 HHs), 3.67% (04 HHs) and 1.83% (02 HHs) have answered that they used to face the insufficient food consumption from less than 30 days, 30 days, 60 days and more than 60 days, respectively, as stated in the figure 3.15 below.



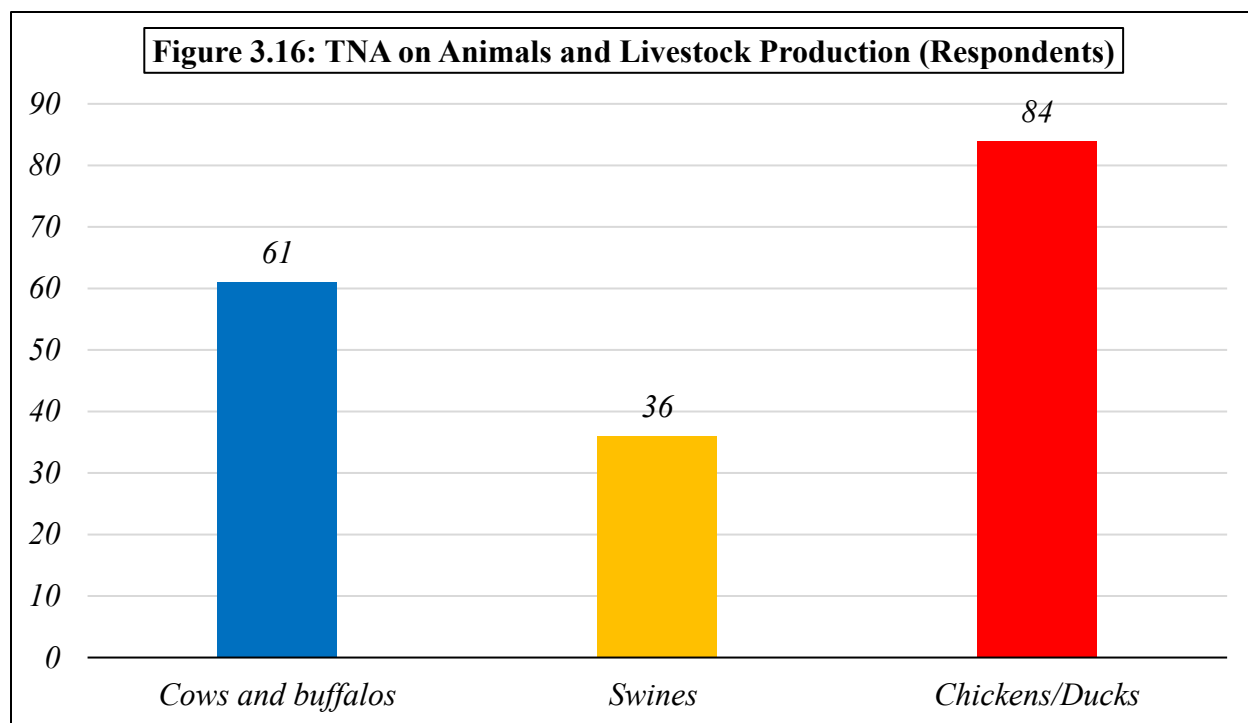
3.8 Training Needs Assessment¹⁶ (TNA)

59. In this beneficiary profile survey, the TNA is divided into five categories such as (i) the assessment on the animal and livestock production, (ii) the assessment on the fishery and aquatic production, (iii) the evaluation on the crops production, (iv) the assessment on the nutrition sensitive agriculture, and (v) the assessment on the contract farming implementation. For details of TNA questionnaires is attached in the annex 4.8 below of this report.

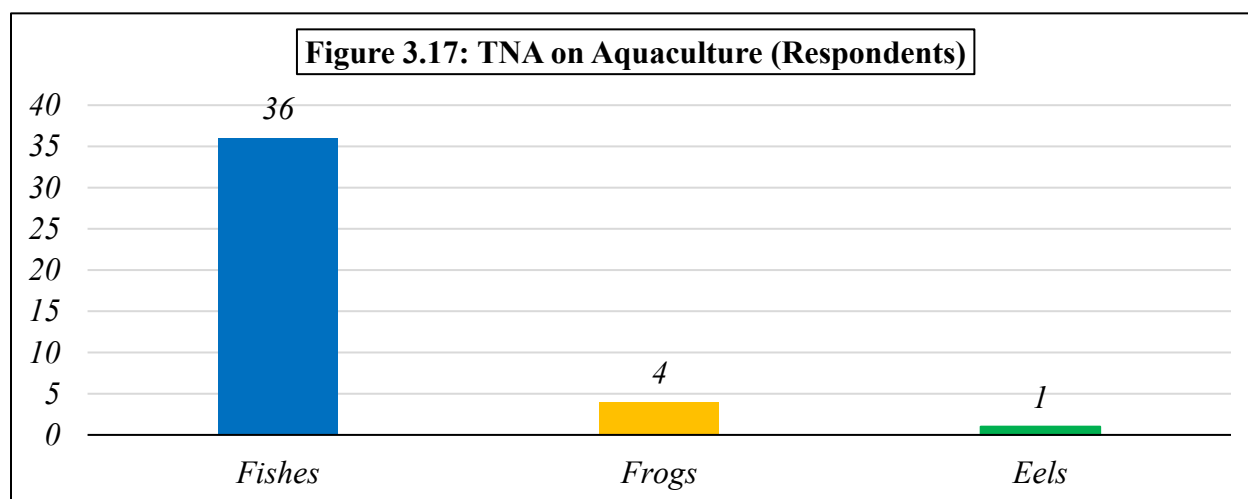
60. According to the results of interview of all 109 respondents, it is found that, for the animal and livestock production, there are 61, 36, and 84 respondents want to get the training on cow/buffalo, swine, chicken and duck raising production, respectively, as stated in the figure 3.16 below. Remarkably, the technical trainings shall have been covered on animals raising, breeding, feeds making, vaccination, diseases treatment, cage preparation, business planning preparation and other technical supports. In addition, each respondent is able to answer and chose more than one option during the interview.

¹⁶ “Training Needs Assessment” (TNA) is **the method of determining if a training need exists and, if it does, what training is required to fill the gap**. TNA seeks to identify accurately the levels of the present situation in the target surveys, interview, observation, secondary data and/or workshop. Available at:

https://www.jica.go.jp/project/cambodia/0601331/pdf/english/3_TNA_01.pdf.

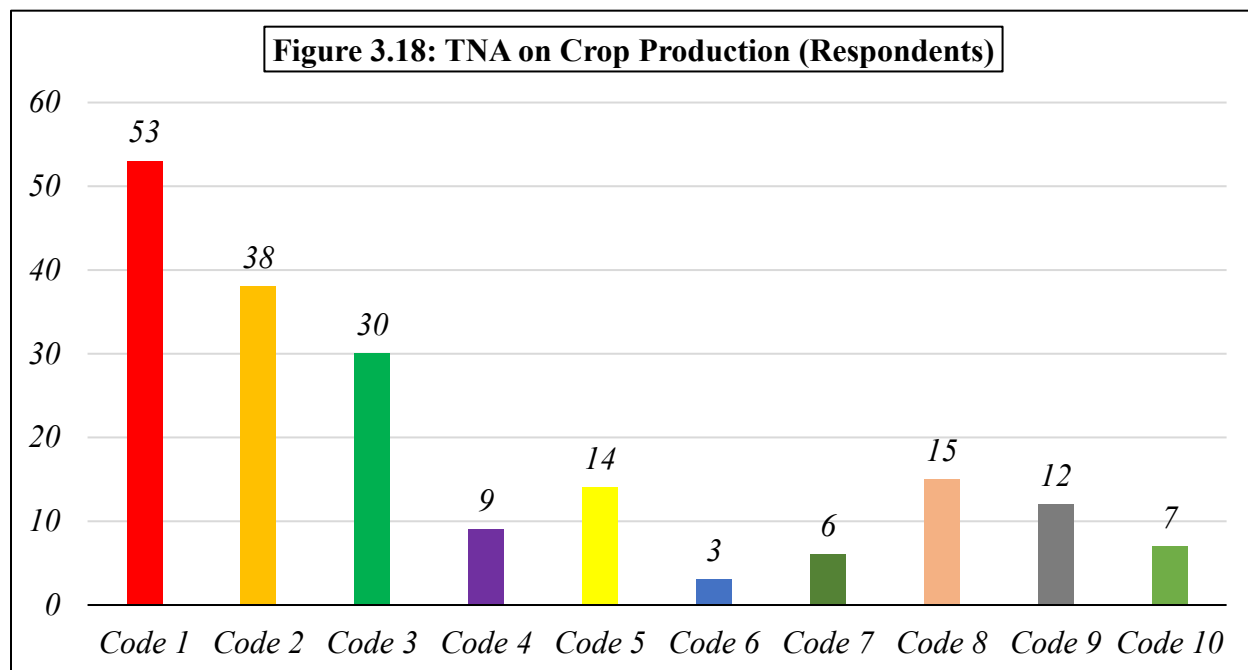


61. Figure 3.17 below shows about the TNA on aquaculture, according to the results of interview of all 109 respondents. As results, it is found that there are 36, 4 and 1 respondents want to get the training on fishes, frogs and eels, respectively. Remarkably, the technical trainings shall have been covered on animals raising, breeding, feeds making, vaccination, diseases treatment, cage preparation, business planning preparation and other technical supports. In addition, each respondent is able to answer and chose more than one option during the interview.

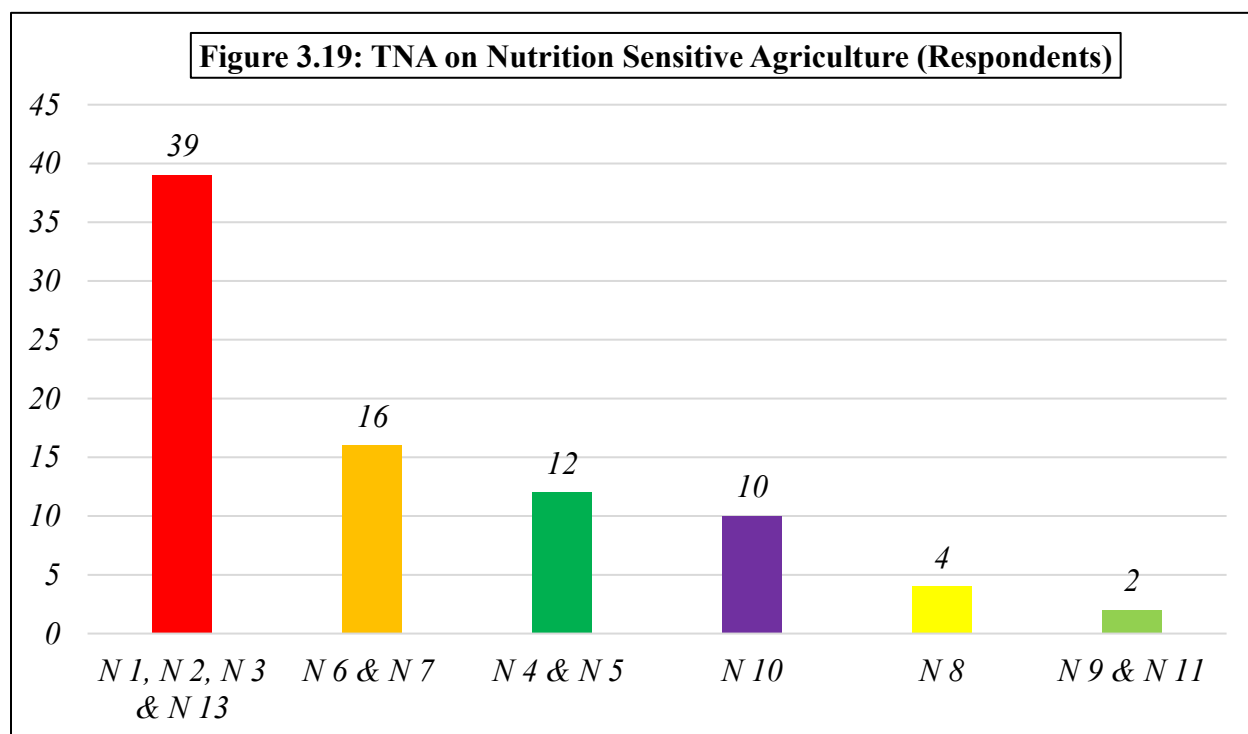


62. For TNA on crops production, it is orderly coded for each specific title from **Code 1** to **Code 10**. According to the interview with all 109 HHs on the TNA of crops production, it is found that the **Code 1**, **Code 2**, **Code 3**, **Code 4**, **Code 5**, **Code 6**, **Code 7**, **Code 8**, **Code 9** and **Code 10** have been rationally rated as following results **53, 38, 30, 9, 14, 3, 6, 15, 12**, and **7** responses, respectively. Figure 3.18 indicates about the the TNA on crops production based on the

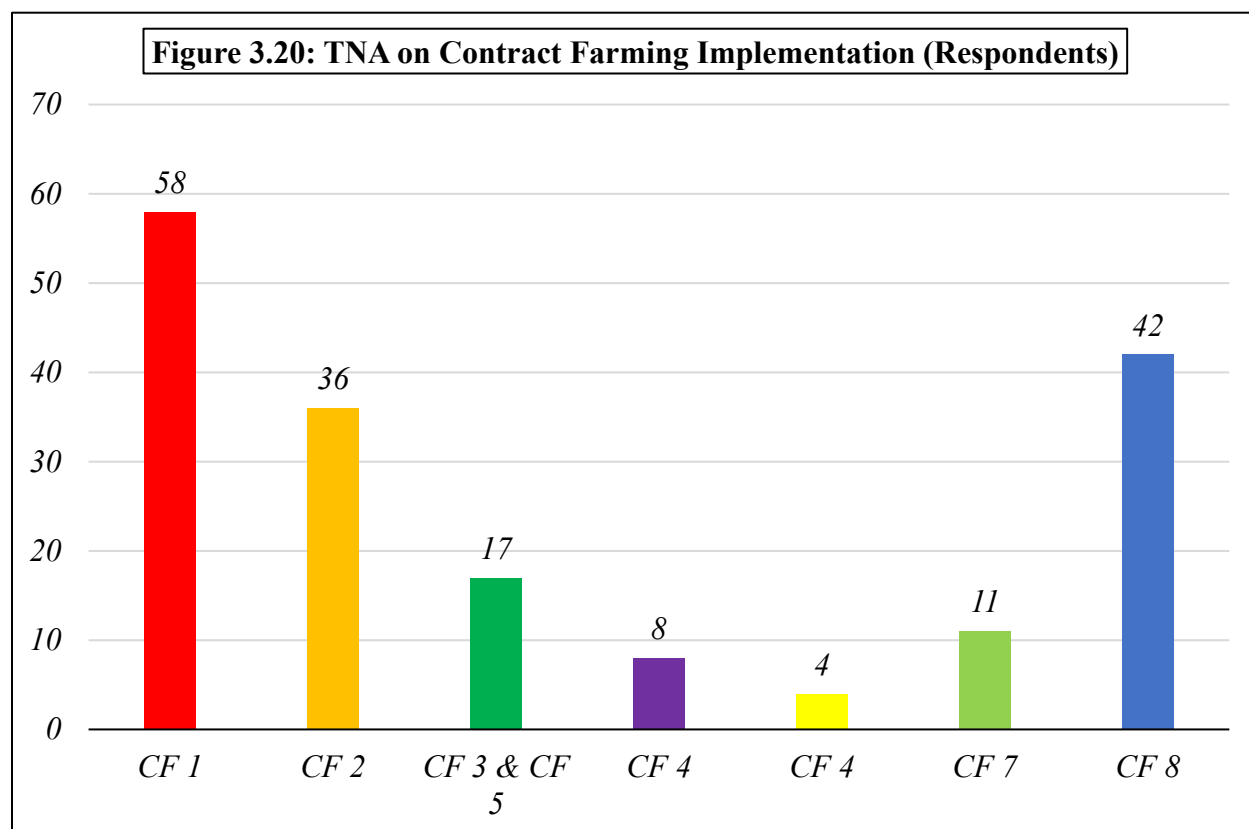
interview. Noticeably, each respondent is able to answer and chose more than one option during the interview.



63. For TNA on nutrition sensitive agriculture (NSA), it is orderly coded for each specific title from N 1 to N 13. According to the interview with all 109 HHs on the TNA of NSA, it is found that the N 1, N 2, N 3, & N 13, N 6 & N 7, N 4 & N 5, N 10, N 8 and N 9 & N 11 have been rationally rated as following results 39, 16, 12, 10, 4, and 2 responses, respectively. Figure 3.19 below indicates about the the TNA on NSA based on the interview. Noticeably, each respondent is able to answer and chose more than one option during the interview.



64. For TNA on Contract Farming (CF) implementation, it is orderly coded for each specific title from **CF 1** to **CF 9**. According to the interview with all 109 HHs on the TNA of CF implementation, it is found that the **CF 1, CF 2, CF 3 & CF 5, CF 4, CF 6, CF 7** and **CF 8** have been rationally rated as following results **79, 16, 11, 10, 3, 2, and 1** response, respectively. Figure 3.20 indicates about the the TNA on CF implementation based on the interview. Noticeably, each respondent is able to answer and chose more than one option during the interview.



3.9 Conclusion

65. After having interviewed with all 109 respondents and having compiled of all information into this beneficiary report, it is vitally and briefly concluded as following that (1) the potential crops production such as upland paddy/rice (Total planting areas 52.04 ha, total yields 61.57 tons, average land holding 0.48 ha/HH, average yield 1.18 ton per hectare), cashew tree (Total planting areas 227.60 ha, total yields 167.45 tons, harvested areas last year 225.60 ha, average land holding 2.09 ha/HH and average yield 0.74 ton/ha), cassava (Total planting areas 38.4 ha with total yields sold in dried cassava chip 32.07 ton), (2) the potential animals and livestock production such as cows/buffalos (106 heads), swine and mice pigs (37 heads), chickens (720 heads), and ducks (19 heads), and (3) the potential of other related agricultural practices.

66. For the poverty line in **Phum Pir village**, it is economically assumed that they are not living under poverty line¹⁷ because of their daily income (in total approximately 19,694.92 riels/day/HH (equals to 4.76 USD/day/HH) which is calculated based on on farm (12,399.21 riels/day/HH) and off farm (7,295.71 riels/day/HH)) is more than 2.67 USD per day per household¹⁸. However, there are some people inside the village still facing the problems on food security consumption via household due to several reasons such as the age, the land shortages, etc. during the interviewed. In overall, the people are considerably living above the poverty line.
67. At the same time, it is totally concluded that the percentage of know-how on the technology application via the mobile phone to access either the agricultural farming documents or markets information and so on even though they had had the smartphone is tremendously low level. In addition, it is remarkably concluded that the opportunities to get the agricultural technical trainings is such more than they were being since the past decades. Truly, it means that they used to be instructed about the agricultural techniques as mentioned above as well.

3.10 Suggestions

68. Through the TNA results, the LASED III project shall formulate the adequately strategy to support them in terms of technical and practical supports relatively. For instances, the supporting of livestock production and animal production to increase their productivity and vegetation farming as they are doing presently.
69. In terms of markets and markets linkages, the LASED III project shall firstly define the group of interest to form up the legal producer groups officially in order to get the benefits of business matching platform preparation and contract farming¹⁹ negotiation for better markets guarantee.

¹⁷ The Cambodia Poverty Assessment 2022: Toward a More Inclusive and Resilient Cambodia shows the country has made remarkable progress in reducing poverty over the past decade, but that some recent gains have been threatened by the impact of the COVID-19 pandemic on the economy. Cambodia has updated the poverty line based on the Socio-Economic Survey 2019-2020, where the national minimum is set at 10,951 riels (about \$ 2.7) per person per day. Accessed on Jan 30th, 2023 from the source available at:

<https://documents1.worldbank.org/curated/en/099155111222239793/pdf/P1735940c0e8b508d0b80e0c7375c89d9c0.pdf>.

¹⁸ This is to remark that this data does not reflects to the whole national assessment by using this collected data from each 81 HHs in **Psang IC village**. However, this data is purposively used under the LASED III only. In addition, it is just using the national data for comparison to assume the current status economic of this ethic people group.

¹⁹ Contract farming (CF) is increasingly seen as an effective mechanism to maximize the inclusion of and benefits for small-scale farmers, while giving some control over production to agribusinesses without requiring land ownership. In Cambodia, CF takes many forms and involves food and industrial crops, yet the different CF models and contract types have not been identified. Farmers and contractors have encountered many problems in obtaining reliable benefits from and sustaining CF schemes.

70. It is economically useful to help farmers increase their incomes by enabling them to sell their products at higher prices. In addition, it allows farmer members to negotiate as a group and help small farmers in both output and input markets. At the same time, the revolving fund is established to carry out specific activities, and the primary advantage of this fund is it may be loaned or spent repeatedly among the producer groups. It can support the either land recipients or ethnic groups as well.
71. To promote the sustainable exit strategy in the future, the LASED III shall promote the commune extension workers who will be selected from the domestic and inside **Phum Pir village** itself through the technical and professional skills provided as well as the allowances supports suitably provide to them during the periods of the project implementing. In addition, the existing mechanism under LASED III project such as village extension workers (VEWs), village animal health workers (VAHWs) and Agricultural Development Facilitators (ADFs) shall be engaged regionally to support them in terms of agriculture and economic development inside the whole **Phum Pir village**.

IV. ANNEXES

Annex 4.1: List of Interviewees in Phum Pir village

No	Name	Sex	Age	Ethic group	Education level	Children	Son	Daughter	Village	Commune	District	Province
1	Yim Yem	M	71	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
2	Tuoy Phorch	F	37	Kreung	Primary school	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
3	Chen Nhi	F	40	Kreung	Did not study	4	3	1	Phum Pir	L'ak	O Chum	Ratanakiri
4	Smien Meu	F	35	Kreung	Did not study	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
5	Thick He	F	50	Kreung	Did not study	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
6	Thie Krieng	M	28	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
7	Khem Kasiel	M	32	Kreung	Did not study	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
8	Laka Pheak	M	50	Kreung	Primary school	4	3	1	Phum Pir	L'ak	O Chum	Ratanakiri
9	Som Bev	F	36	Kreung	Did not study	3	-	3	Phum Pir	L'ak	O Chum	Ratanakiri
10	Smien Yol	M	28	Kreung	Primary school	2	-	2	Phum Pir	L'ak	O Chum	Ratanakiri
11	Smien Ngev	F	22	Kreung	Primary school	1	1		Phum Pir	L'ak	O Chum	Ratanakiri
12	Smien Reum	M	32	Kreung	Did not study	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
13	Ham Chandy	F	20	Kreung	Did not study	1	1		Phum Pir	L'ak	O Chum	Ratanakiri
14	Bai Angham	M	52	Kreung	Did not study	10	8	2	Phum Pir	L'ak	O Chum	Ratanakiri
15	Kong Chhorvy	F	23	Kreung	Primary school	1	1		Phum Pir	L'ak	O Chum	Ratanakiri
16	Ban Ratana	M	28	Kreung	Secondary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
17	Khlob Yeub	M	41	Kreung	Did not study	4	2	2	Phum Pir	L'ak	O Chum	Ratanakiri
18	Roam Savet	F	50	Kreung	Did not study	4	3	1	Phum Pir	L'ak	O Chum	Ratanakiri
19	Brak Am	F	40	Kreung	Did not study	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
20	Kreng Bier	F	40	Kreung	Did not study	4	1	3	Phum Pir	L'ak	O Chum	Ratanakiri
21	Khoun Khamnang	F	32	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
22	Yin Sok	M	33	Kreung	Primary school	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
23	Yin Sophorn	M	25	Kreung	Primary school	1	1		Phum Pir	L'ak	O Chum	Ratanakiri
24	Khouloum Bahaet	M	37	Kreung	Did not study	2		2	Phum Pir	L'ak	O Chum	Ratanakiri

25	Te samoat	M	32	Kreung	Primary school	1	-	1	Phum Pir	L'ak	O Chum	Ratanakiri
26	Leang Yean	F	32	Kreung	Did not study	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
27	Thea Moeung	M	35	Kreung	Did not study	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
28	Thy Phearom	M	31	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
29	Kanhnh Rongaut	F	38	Kreung	Did not study	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
30	Borng Kanhchok	M	56	Kreung	Primary school	6	1	5	Phum Pir	L'ak	O Chum	Ratanakiri
31	Lav Namchin	M	34	Kreung	Primary school	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
32	Yeung Ba	F	40	Kreung	Did not study	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
33	Roeun Sopha	F	57	Kreung	Did not study	5	1	4	Phum Pir	L'ak	O Chum	Ratanakiri
34	Smeang Born	M	45	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
35	Buok Khon	M	39	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
36	Chron Phea	M	48	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
37	Chroung Lngea	M	39	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
38	Na Engsrn	M	27	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
39	Vit Kaolan	M	27	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
40	Rueng Vorn	M	27	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
41	Sapi Dev	M	38	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
42	Liv Sambiv	F	38	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
43	Lao In	M	29	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
44	Lambon Puy	F	29	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
45	Minh Siem	F	45	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
46	Nos Saboun	F	26	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
47	Nol Brieck	F	33	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
48	Smien Reu	F	28	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
49	Phen Kambus	F	25	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
50	Tory Touch	F	33	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
51	Toch Payot	F	36	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
52	Bai Langiech	F	33	Kreung	Primary school				Phum Pir	L'ak	O Chum	Ratanakiri
53	Ba Yy	M	25	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
54	Sleng Kaen	M	70	Kreung	Did not study	4	2	2	Phum Pir	L'ak	O Chum	Ratanakiri

55	Ha Youngbonti	M	34	Kreung	Primary school	2	-	2	Phum Pir	L'ak	O Chum	Ratanakiri
56	Chun Koryeb	F	57	Kreung	Primary school	6	3	3	Phum Pir	L'ak	O Chum	Ratanakiri
57	Yeng Ber	F	41	Kreung	Did not study	6	4	2	Phum Pir	L'ak	O Chum	Ratanakiri
58	Phlork Phong	F	42	Kreung	Did not study	4	1	3	Phum Pir	L'ak	O Chum	Ratanakiri
59	Kamphen Kamten	F	48	Kreung	Did not study	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
60	Yun Chan	M	32	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
61	Reuy Boeng	F	39	Kreung	Did not study	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
62	Reuy Preab	F	48	Kreung	Did not study	4	1	3	Phum Pir	L'ak	O Chum	Ratanakiri
63	Khat Pisey	F	20	Kreung	High school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
64	Nhueng Ngouy	M	35	Kreung	Did not study	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
65	Nin Klang	M	37	Kreung	Did not study	4	2	2	Phum Pir	L'ak	O Chum	Ratanakiri
66	Prom Bopha	F	24	Kreung	Secondary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
67	Hay Yinra	F	25	Kreung	Secondary school	2	-	2	Phum Pir	L'ak	O Chum	Ratanakiri
68	Pich Lavain	M	29	Kreung	Did not study	1	-	1	Phum Pir	L'ak	O Chum	Ratanakiri
69	Man	M	60	Kreung	Secondary school	4	2	2	Phum Pir	L'ak	O Chum	Ratanakiri
70	Chouy Brat	F	65	Kreung	Did not study	5	3	2	Phum Pir	L'ak	O Chum	Ratanakiri
71	Khem Kror	F	41	Kreung	High school	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
72	Klum Blel	M	73	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
73	Kay Khlon	M	41	Kreung	Primary school	2	2	-	Phum Pir	L'ak	O Chum	Ratanakiri
74	Yeun Veuch	F	30	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
75	Blel Se	M	37	Kreung	Primary school	7	5	2	Phum Pir	L'ak	O Chum	Ratanakiri
76	Vuosa Kimlean	F	45	Kreung	Primary school	3	3	-	Phum Pir	L'ak	O Chum	Ratanakiri
77	Khim Mong	M	41	Kreung	Primary school	3	-	3	Phum Pir	L'ak	O Chum	Ratanakiri
78	Khen Lak	M	24	Kreung	Primary school	1	-	1	Phum Pir	L'ak	O Chum	Ratanakiri
79	Nhe Chhveng	M	36	Kreung	Primary school	2	2	-	Phum Pir	L'ak	O Chum	Ratanakiri
80	Cheung Kajohn	F	50	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
81	Hin Ratha	M	20	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
82	Bairoampeuy	M	36	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
83	Roam Bienglangleav	M	80	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
84	Sarim Preat	F	28	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
85	Krie Peun	M	38	Kreung	Primary school	3	3	-	Phum Pir	L'ak	O Chum	Ratanakiri
86	Chroung Roungear	M	40	Kreung	Primary school	5	2	3	Phum Pir	L'ak	O Chum	Ratanakiri

87	Khak Korteang	M	70	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
88	Kakrang Kanha	M	80	Kreung	Primary school	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
89	Chhi Kadong	M	42	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
90	Lmien Bin	M	44	Kreung	Primary school	4	2	2	Phum Pir	L'ak	O Chum	Ratanakiri
91	Chuon Nheam	M	49	Kreung	Primary school	4	3	1	Phum Pir	L'ak	O Chum	Ratanakiri
92	Teng Khlob	F	78	Kreung	Primary school	5	3	2	Phum Pir	L'ak	O Chum	Ratanakiri
93	Khlo Beut	M	36	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
94	Voeung Yum	M	20	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
95	Yoeung Thoeun	M	64	Kreung	Primary school	8	6	2	Phum Pir	L'ak	O Chum	Ratanakiri
96	Chak Romtiet	F	35	Kreung	Primary school	2	2	-	Phum Pir	L'ak	O Chum	Ratanakiri
97	Treng Bier	F	40	Kreung	Primary school	4	1	3	Phum Pir	L'ak	O Chum	Ratanakiri
98	Tuot Chreng	M	26	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
99	Som Nang	F	29	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
100	Van Chantha	M	37	Kreung	Primary school	3	1	2	Phum Pir	L'ak	O Chum	Ratanakiri
101	Kham Khoun	M	58	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
102	Haen Ny	M	27	Kreung	Primary school	2	2	-	Phum Pir	L'ak	O Chum	Ratanakiri
103	Vy Sarin	M	46	Kreung	Primary school	2	-	2	Phum Pir	L'ak	O Chum	Ratanakiri
104	Len Sophea	F	35	Kreung	Primary school	1	1	-	Phum Pir	L'ak	O Chum	Ratanakiri
105	Eng Try	M	22	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri
106	Ngen srleng	F	34	Kreung	Primary school	3	2	1	Phum Pir	L'ak	O Chum	Ratanakiri
107	Seipu Daw	M	39	Kreung	Primary school	2	1	1	Phum Pir	L'ak	O Chum	Ratanakiri
108	Muong Peak	F	50	Kreung	Primary school	6	5	1	Phum Pir	L'ak	O Chum	Ratanakiri
109	khaun kanhna	M	37	Kreung	Primary school	-	-	-	Phum Pir	L'ak	O Chum	Ratanakiri

Annex 4.2: List of Families Planting Cashew Tree

No	Name	Sex	Planting area (ha)	Cashew's age	Yields (t)	Sell QTY (t)	Prices (Riel/kg)
1	Yim Yem	M	-	-	-	-	-
2	Tuoy Phorch	F	-	-	-	-	-
3	Chen Nhi	F	-	-	-	-	-
4	Smien Meu	F	5.00	5	5.00	5.00	4,000.00
5	Thick He	F	0.50	5	1.00	1.00	4,000.00
6	Thie Krieng	M	1.00	7	1.00	1.00	4,000.00
7	Khem Kasiel	M	1.50	8	1.20	1.20	4,000.00
8	Laka Pheak	M	5.00	10	5.00	5.00	4,000.00
9	Som Bev	F	1.00	10	1.20	1.20	2,500.00
10	Smien Yol	M	1.00	9	1.00	1.00	4,000.00
11	Smien Ngev	F	1.00	5	1.00	1.00	4,000.00
12	Smien Reum	M	0.50	9	0.80	0.80	4,000.00
13	Ham Chandy	F	-	-	-	-	-
14	Bai Angham	M	7.00	10	5.00	5.00	4,100.00
15	Kong Chhorvy	F	2.00	15	1.50	1.50	-
16	Ban Ratana	M	2.00	7	2.00	2.00	4,000.00
17	Khlob Yeub	M	4.00	5	3.20	3.20	-
18	Roam Savet	F	-	-	-	-	-
19	Brak Am	F	2.50	10	3.00	3.00	
20	Kreng Bier	F	4.00	15	4.50	4.50	4,000.00
21	Khoun Khamnang	F	2.00	10	2.00	2.00	4,000.00
22	Yin Sok	M	0.50	10	0.70	0.70	4,000.00
23	Yin Sophorn	M	1.50	7	2.00	2.00	-
24	Khloom Bahaet	M	2.50	10	2.00	2.00	-
25	Te samoat	M	2.50	8	2.00	2.00	4,100.00
26	Leang Yean	F	3.00	10	2.50	2.50	4,000.00
27	Thea Moeung	M	1.50	4	1.00	1.00	4,000.00
28	Thy Phearom	M	1.00	10	0.50	0.50	4,000.00
29	Kanhnh Rongaut	F	2.00	10	2.00	2.00	4,000.00
30	Borng Kanhchok	M	5.60	5	4.00	4.00	4,000.00
31	Lav Namchin	M	3.00	8	2.00	2.00	3,000.00
32	Yeung Ba	F	2.00	5	2.00	2.00	4,000.00
33	Roeun Sopha	F	2.00	10	2.00	2.00	-
34	Smeang Born	M	2.00	12	2.00	2.00	4,000.00
35	Buok Khon	M	5.00	10	4.00	4.00	4,200.00
36	Chron Phea	M	0.50	10	0.80	0.80	4,100.00
37	Chroung Lngea	M	1.00	8	0.30	0.30	4,000.00
38	Na Engsrn	M	1.00	10	0.30	0.30	4,000.00
39	Vit Kaolan	M	1.00	10	0.30	0.30	4,200.00
40	Rueng Vorn	M	1.50	10	0.50	0.50	4,100.00
41	Sapi Dev	M	4.00	15	2.50	2.50	4,200.00
42	Liv Sambiv	F	-	-	-	-	-
43	Lao In	M	3.00	10	1.00	1.00	4,000.00
44	Lambon Puy	F	1.00	4	0.60	0.60	4,200.00
45	Minh Siem	F	2.00	7	1.20	1.20	4,000.00
46	Nos Saboun	F	-	-	-	-	-
47	Nol Brieck	F	3.00	10	2.00	2.00	4,000.00
48	Smien Reu	F	1.50	5	0.90	0.90	4,000.00
49	Phen Kambus	F	3.00	10	2.00	2.00	4,100.00

50	Tory Touch	F	-	-	-	-	-
51	Toch Payot	F	6.00	5	5.00	5.00	4,000.00
52	Bai Langiech	F	3.00	10	1.50	1.50	4,000.00
53	Ba Yy	M	2.00	6	1.80	1.80	4,000.00
54	Sleng Kaen	M	1.00	10	0.10	0.10	4,000.00
55	Ha Youngbonti	M	4.00	5	0.50	0.50	4,000.00
56	Chun Koryeb	F	2.00	10	2.00	2.00	4,000.00
57	Yeng Ber	F	0.50	10	0.25	0.25	4,000.00
58	Phlork Phong	F	1.50	13	0.13	0.13	4,000.00
59	Kamphen Kamten	F	3.00	8	0.50	0.50	4,000.00
60	Yun Chan	M	1.00	5	0.30	0.30	4,000.00
61	Reuy Boeng	F	1.00	10	0.50	0.50	4,000.00
62	Reuy Preab	F	1.00	8	0.75	0.75	4,000.00
63	Khat Pisey	F	2.00	9	0.25	0.25	4,000.00
64	Nhueng Ngouy	M	0.50	6	0.02	0.02	4,000.00
65	Nin Klang	M	2.00	10	0.25	0.25	4,000.00
66	Prom Bopha	F	1.00	24	0.30	0.30	4,000.00
67	Hay Yinra	F	1.50	7	0.30	0.30	4,000.00
68	Pich Lavain	M	2.00	10	1.00	1.00	4,200.00
69	Man	M	1.00	10	1.00	1.00	-
70	Chouy Brat	F	0.50	10	1.00	1.00	4,200.00
71	Khem Kror	F	3.00	11	2.00	2.00	4,200.00
72	Klum Blel	M	4.00	10	3.00	3.00	4,200.00
73	Kay Khlon	M	7.00	12	6.00	6.00	-
74	Yeun Veuch	F	1.00	8	1.00	1.00	4,200.00
75	Blel Se	M	0.50	7	0.50	0.50	4,200.00
76	Vuosa Kimlean	F	4.00	6	3.00	3.00	4,200.00
77	Khim Mong	M	10.00	13	10.00	10.00	-
78	Khen Lak	M	1.00	5	1.00	1.00	4,200.00
79	Nhe Chhveng	M	0.50	10	0.50	0.50	4,200.00
80	Cheung Kajohn	F	-	-	-	-	-
81	Hin Ratha	M	-	-	-	-	-
82	Bairoampeuy	M	5.00	7	3.00	3.00	4,200.00
83	Roam Bienglangeav	M	3.00	10	2.00	2.00	4,200.00
84	Sarim Preat	F	7.00	10	5.00	5.00	4,200.00
85	Krie Peun	M	2.50	10	1.80	1.80	4,200.00
86	Chroung Roungear	M	1.00	15	1.50	1.50	4,100.00
87	Khak Korteang	M	-	-	-	-	-
88	Kakrang Kanha	M	1.50	15	1.00	1.00	4,000.00
89	Chhi Kadong	M	3.00	10	2.50	2.50	4,100.00
90	Lmien Bin	M	2.00	12	2.00	2.00	4,000.00
91	Chuon Nheam	M	5.00	10	4.00	4.00	4,200.00
92	Teng Khlob	F	0.50	10	0.80	0.80	4,100.00
93	Khlo Beut	M	1.00	8	0.30	0.30	4,000.00
94	Voeung Yum	M	1.00	10	0.30	0.30	4,000.00
95	Yoeung Thoeun	M	1.00	10	0.30	0.30	4,200.00
96	Chak Romtiet	F	1.50	10	0.50	0.50	4,100.00
97	Treng Bier	F	4.00	15	2.50	2.50	4,200.00
98	Tuot Chreng	M	-	-	-	-	-
99	Som Nang	F	3.00	10	1.00	1.00	4,000.00
100	Van Chantha	M	1.00	4	0.60	0.60	4,200.00
101	Kham Khoun	M	2.00	7	1.20	1.20	4,000.00
102	Haen Ny	M	-	-	-	-	-
103	Vy Sarin	M	3.00	10	2.00	2.00	4,000.00

104	Len Sophea	F	1.50	5	0.90	0.90	4,000.00
105	Eng Try	M	3.00	10	2.00	2.00	4,100.00
106	Ngen srleng	F	-	-	-	-	-
107	Seipu Daw	M	6.00	5	5.00	5.00	4,000.00
108	Muong Peak	F	3.00	10	1.50	1.50	4,000.00
109	khaun kanhna	M	2.00	6	1.80	1.80	4,000.00
Total (ha, t)			227.60	-	167.45	167.45	-

Annex 4.3: List of Families Planting Cassava

No	Name	Sex	Planting area (ha)	Dried Cassava Sell QTY (t)	Prices (Riel/kg)
1	Yim Yem	M	-		
2	Tuoy Phorch	F	-		
3	Chen Nhi	F	-		
4	Smien Meu	F	1.00	0.21	750.00
5	Thick He	F	-		
6	Thie Krieng	M	1.00	2.00	800.00
7	Khem Kasiel	M	-		
8	Laka Pheak	M	-		
9	Som Bev	F	-		
10	Smien Yol	M	-		
11	Smien Ngev	F	1.00	0.30	600.00
12	Smien Reum	M	-		
13	Ham Chandy	F			
14	Bai Angham	M	0.50	0.30	700.00
15	Kong Chhorvy	F	-		
16	Ban Ratana	M	-		
17	Khlob Yeub	M	-		
18	Roam Savet	F			
19	Brak Am	F	-		
20	Kreng Bier	F	-		
21	Khoun Khamnang	F	-		
22	Yin Sok	M	-		
23	Yin Sophorn	M	-		
24	Khloom Bahaet	M	-		
25	Te samoat	M	-		
26	Leang Yean	F	-		
27	Thea Moeung	M	-		
28	Thy Phearom	M	-		
29	Kanhnhha Rongaut	F	2.00	1.00	700.00
30	Borng Kanhchok	M	-		
31	Lav Namchin	M	3.00	1.00	600.00
32	Yeung Ba	F	0.50	0.43	700.00
33	Roeun Sopha	F	-		
34	Smeang Born	M	-	-	-
35	Buok Khon	M	-	-	-
36	Chron Phea	M	-	-	-
37	Chroung Lngea	M	-	-	-
38	Na Engsron	M	-	-	-
39	Vit Kaolan	M	-	-	-
40	Rueng Vorn	M	-	-	-
41	Sapi Dev	M	-	-	-
42	Liv Sambiv	F	2.00	-	-
43	Lao In	M	-	-	-

44	Lambon Puy	F	2.00	1,5	680.00
45	Minh Siem	F	-	-	-
46	Nos Saboun	F	1.00	1,2	700.00
47	Nol Briech	F	3.50	3.00	730.00
48	Smien Reu	F	-	-	-
49	Phen Kambus	F	-	-	-
50	Tory Touch	F	-	-	-
51	Toch Payot	F	1.00	4.00	700.00
52	Bai Langiech	F	-	-	-
53	Ba Yy	M	-	-	-
54	Sleng Kaen	M	0.40	1.00	500.00
55	Ha Youngbonti	M	1.00	3.00	730.00
56	Chun Koryeb	F	-	-	-
57	Yeng Ber	F	-	-	-
58	Phlork Phong	F	-	-	-
59	Kamphen Kamten	F	-	-	-
60	Yun Chan	M	-	-	-
61	Reuy Boeng	F	-	-	-
62	Reuy Preab	F	-	-	-
63	Khat Pisey	F	-	-	-
64	Nhueng Ngouy	M	-	-	-
65	Nin Klang	M	-	-	-
66	Prom Bopha	F	2.00	6.67	600.00
67	Hay Yinra	F	0.50	2.16	600.00
68	Pich Lavain	M	-	-	-
69	Man	M	-	-	-
70	Chouy Brat	F	-	-	-
71	Khem Kror	F	0.50	-	-
72	Klum Blel	M	0.50	-	-
73	Kay Khlon	M	1.00	-	600.00
74	Yeun Veuch	F	-	-	600.00
75	Blel Se	M	-	-	-
76	Vuosa Kimlean	F	-	-	-
77	Khim Mong	M	4.00	-	650.00
78	Khen Lak	M	-	-	-
79	Nhe Chhveng	M	-	-	-
80	Cheung Kajohn	F	-	-	-
81	Hin Ratha	M	0.50	-	700.00
82	Bairoampeuy	M	-	-	-
83	Roam Bienglangleav	M	-	-	-
84	Sarim Preat	F	-	-	-
85	Krie Peun	M	-	-	-
86	Chroung Roungear	M	-	-	-
87	Khak Korteang	M	-	-	-
88	Kakrang Kanha	M	-	-	-
89	Chhi Kadong	M	-	-	-
90	Lmien Bin	M	-	-	-
91	Chuon Nheam	M	-	-	-
92	Teng Khlob	F	-	-	-
93	Khlo Beut	M	-	-	-
94	Voeung Yum	M	-	-	-
95	Yoeung Thoeun	M	-	-	-
96	Chak Romtiet	F	-	-	-
97	Treng Bier	F	-	-	-
98	Tuot Chreng	M	2.00	-	-
99	Som Nang	F	-	-	-
100	Van Chantha	M	2.00	1,5	680.00

101	Kham Khoun	M	-	-	-
102	Haen Ny	M	1.00	1,2	700.00
103	Vy Sarin	M	3.50	3.00	730.00
104	Len Sophea	F	-	-	-
105	Eng Try	M	-	-	-
106	Ngen srleng	F	-	-	-
107	Seipu Daw	M	1.00	4.00	700.00
108	Muong Peak	F	-	-	-
109	khaun kanhna	M	-	-	-
Total (t)			38.40	32.07	-

Annex 4.4: List of Families Planting Upland Paddy/Rice

No	Name	Sex	Planting area (ha)	Yields (t)	Sell QTY (t)	Prices (Riel/kg)
1	Yim Yem	M	1.44	0.80	-	-
2	Tuoy Phorch	F	1.00	1.25	-	-
3	Chen Nhi	F	0.50	2.00	-	-
4	Smien Meu	F	0.50	0.50	-	-
5	Thick He	F	-	-	-	-
6	Thie Krieng	M	2.00	-	-	-
7	Khem Kasiel	M	0.50	-	-	-
8	Laka Pheak	M	1.50	3.00	-	-
9	Som Bev	F	1.00	0.75	-	-
10	Smien Yol	M	0.50	0.50	-	-
11	Smien Ngev	F	0.50	0.30	-	-
12	Smien Reum	M	0.50	0.50	-	-
13	Ham Chandy	F	-	-	-	-
14	Bai Angham	M	0.50	0.50	-	-
15	Kong Chhorvy	F	0.50	0.50	-	-
16	Ban Ratana	M	0.50	0.60	-	-
17	Khlob Yeub	M	-	-	-	-
18	Roam Savet	F	-	-	-	-
19	Brak Am	F	1.00	1.00	-	-
20	Kreng Bier	F	0.50	0.50	-	-
21	Khoun Khamnang	F	0.30	0.01	-	-
22	Yin Sok	M	0.50	0.90	-	-
23	Yin Sophorn	M	0.50	0.75	-	-
24	Khloom Bahaet	M	0.50	0.40	-	-
25	Te samoat	M	-	-	-	-
26	Leang Yean	F	0.50	1.00	-	-
27	Thea Moeung	M	-	-	-	-
28	Thy Phearom	M	1.00	3.71	-	-
29	Kanhna Rongaut	F	-	-	-	-
30	Borng Kanhchok	M	0.50	0.60	-	-
31	Lav Namchin	M	0.50	0.50	-	-
32	Yeung Ba	F	-	-	-	-
33	Roeun Sopha	F	1.00	0.50	-	-
34	Smeang Born	M	-	-	-	-
35	Buok Khon	M	1.00	1.00	-	-
36	Chron Phea	M	1.00	0.70	-	-
37	Chroung Lngea	M	1.00	0.90	-	-

38	Na Engsrón	M	-	-	-	-
39	Vit Kaolan	M	0.50	0.30	-	-
40	Rueng Vorn	M	0.50	1.00	-	-
41	Sapi Dev	M	1.00	0.80	-	-
42	Liv Sambiv	F	1.50	1.20	-	-
43	Lao In	M	1.00	0.80	-	-
44	Lambon Puy	F	-	-	-	-
45	Minh Siem	F	0.50	0.30	-	-
46	Nos Saboun	F	-	-	-	-
47	Nol Briech	F	-	-	-	-
48	Smien Reu	F	-	-	-	-
49	Phen Kambus	F	-	-	-	-
50	Tory Touch	F	0.50	0.80	-	-
51	Toch Payot	F	0.50	0.70	-	-
52	Bai Langiech	F	0.50	0.60	-	-
53	Ba Yy	M	0.50	0.90	-	-
54	Sleng Kaen	M	0.50	1.20	-	-
55	Ha Youngbonti	M	-	-	-	-
56	Chun Koryeb	F	0.50	2.10	-	-
57	Yeng Ber	F	1.00	0.70	-	-
58	Phlork Phong	F	-	-	-	-
59	Kamphen Kamten	F	0.70	0.70	-	-
60	Yun Chan	M	-	-	-	-
61	Reuy Boeng	F	-	-	-	-
62	Reuy Preab	F	-	-	-	-
63	Khat Pisey	F	0.50	0.48	-	-
64	Nhueng Ngouy	M	-	-	-	-
65	Nin Klang	M	-	-	-	-
66	Prom Bopha	F	0.50	2.10	1.00	1,000.00
67	Hay Yinra	F	0.60	0.70	-	-
68	Pich Lavain	M	0.50	0.40	-	-
69	Man	M	0.50	0.30	-	-
70	Chouy Brat	F	0.50	0.60	-	-
71	Khem Krór	F	0.50	0.65	-	-
72	Klum Blel	M	1.00	1.80	-	-
73	Kay Khlon	M	2.00	2.00	-	-
74	Yeun Veuch	F	0.50	0.62	-	-
75	Blel Se	M	0.50	0.50	-	-
76	Vuosa Kimlean	F	-	-	-	-
77	Khim Mong	M	-	-	-	-
78	Khen Lak	M	-	-	-	-
79	Nhe Chhveng	M	-	-	-	-
80	Cheung Kajohn	F	0.50	0.55	-	-
81	Hin Ratha	M	-	-	-	-
82	Bairoampeuy	M	0.50	0.60	-	-
83	Roam Bienglangleav	M	-	-	-	-
84	Sarim Preat	F	-	-	-	-
85	Krie Peun	M	0.60	0.60	-	-
86	Chroung Roungear	M	0.60	0.60	-	-
87	Khak Korteang	M	-	-	-	-
88	Kakrang Kanha	M	0.80	0.70	-	-
89	Chhi Kadong	M	0.50	0.60	-	-
90	Lmien Bin	M	-	-	-	-
91	Chuon Nheam	M	1.00	1.00	-	-
92	Teng Khlob	F	1.00	0.70	-	-
93	Khlo Beut	M	1.00	0.90	-	-

94	Voeung Yum	M	-	-	-	-
95	Yoeung Thoeun	M	0.50	0.30	-	-
96	Chak Romtiet	F	0.50	1.00	-	-
97	Treng Bier	F	1.00	0.80	-	-
98	Tuot Chreng	M	1.50	1.20	-	-
99	Som Nang	F	1.00	0.80	-	-
100	Van Chantha	M	-	-	-	-
101	Kham Khoun	M	0.50	0.30	-	-
102	Haen Ny	M	-	-	-	-
103	Vy Sarin	M	-	-	-	-
104	Len Sophea	F	-	-	-	-
105	Eng Try	M	-	-	-	-
106	Ngen srleng	F	0.50	0.80	-	-
107	Seipu Daw	M	0.50	0.70	-	-
108	Muong Peak	F	0.50	0.60	-	-
109	khaun kanhna	M	0.50	0.90	-	-
Total (t)			52.04	61.57	1.00	-

Annex 4.5: List of Families Raising Animals and Livestock

No	Name	Sex	Cow	Buffalo	Swine/Mice Pig	Chicken	Duck
1	Yim Yem	M	-	-	-	3	-
2	Tuoy Phorch	F	-	-	-	3	-
3	Chen Nhi	F	1	-	-	2	-
4	Smien Meu	F	2	-	-	20	-
5	Thick He	F	-	-	1	2	-
6	Thie Krieng	M	-	-	1	3	-
7	Khem Kasiel	M	3	-	-	5	-
8	Laka Pheak	M	15	-	2	10	7
9	Som Bev	F	-	-	-	10	-
10	Smien Yol	M	-	-	-	-	-
11	Smien Ngev	F	1	-	-	2	-
12	Smien Reum	M	-	-	-	-	-
13	Ham Chandy	F					
14	Bai Angham	M	-	-	-	5	-
15	Kong Chhorvy	F	2	-	-	-	-
16	Ban Ratana	M	-	-	-	-	-
17	Khlob Yeub	M	2	-	2	2	-
18	Roam Savet	F					
19	Brak Am	F	-	-	-	-	-
20	Kreng Bier	F	-	-	-	-	-
21	Khoun Khamnang	F	-	-	-	-	-
22	Yin Sok	M	-	-	-	-	-
23	Yin Sophorn	M	-	-	2	10	-
24	Khloum Bahaet	M	-	-	-	-	-
25	Te samoat	M	-	-	-	-	-
26	Leang Yean	F	1	1		2	
27	Thea Moeung	M	-	-	1	2	-
28	Thy Phearom	M	10	-	6	30	-

29	Kanhnhha Rongaut	F	2	-	-	5	-
30	Borng Kanhchok	M	3	-	2	2	-
31	Lav Namchin	M	-	-	2	20	-
32	Yeung Ba	F	-	-	-	-	-
33	Roeun Sopha	F	-	-	-	5	-
34	Smeang Born	M	-	-	-	-	-
35	Buok Khon	M	1	-	-	10	-
36	Chron Phea	M	-	-	-	-	-
37	Chroung Lngea	M	-	-	-	-	-
38	Na Engsrone	M	7	-	-	20	-
39	Vit Kaolan	M	-	-	-	-	-
40	Rueng Vorn	M	-	-	-	5	-
41	Sapi Dev	M	-	-	-	-	-
42	Liv Sambiv	F	-	-	1	3	-
43	Lao In	M	-	-	-	-	-
44	Lambon Puy	F	-	-	-	5	-
45	Minh Siem	F	-	-	-	10	-
46	Nos Saboun	F	-	-	-	15	-
47	Nol Briech	F	-	-	-	-	-
48	Smien Reu	F	-	-	-	-	-
49	Phen Kambus	F	-	-	-	20	-
50	Tory Touch	F	-	-	-	-	-
51	Toch Payot	F	-	-	-	50	-
52	Bai Langiech	F	9	-	-	3	-
53	Ba Yy	M	-	-	-	18	-
54	Sleng Kaen	M	-	-	-	20	-
55	Ha Youngbonti	M	-	-	-	30	-
56	Chun Koryeb	F	-	-	-	-	-
57	Yeng Ber	F	-	-	1	3	-
58	Phlork Phong	F	-	-	-	5	-
59	Kamphen Kamten	F	-	-	-	-	-
60	Yun Chan	M	-	-	-	5	-
61	Reuy Boeng	F	-	-	-	-	-
62	Reuy Preab	F	-	-	-	-	-
63	Khat Pisey	F	-	-	-	-	-
64	Nhueng Ngouy	M	-	-	-	-	-
65	Nin Klang	M	-	-	-	5	-
66	Prom Bopha	F	-	-	-	-	-
67	Hay Yinra	F	-	-	1	3	-
68	Pich Lavain	M	-	-	-	30	-
69	Man	M	-	-	-	15	-
70	Chouy Brat	F	1	-	-	10	-
71	Khem Krur	F	1	-	-	15	-
72	Klum Blel	M	5	-	-	15	-
73	Kay Khlon	M	3	-	-	-	-
74	Yeun Veuch	F	1	-	-	20	-
75	Blel Se	M	-	-	-	-	-
76	Vuosa Kimlean	F	-	-	-	-	-
77	Khim Mong	M	5	-	9	20	-

78	Khen Lak	M	-	-	-	10	-
79	Nhe Chhveng	M	-	-	-	10	-
80	Cheung Kajohn	F	-	-	-	5	-
81	Hin Ratha	M	-	-	-	-	-
82	Bairoampeuy	M	8	-	4	15	12
83	Roam Biengangleav	M	-	-	-	-	-
84	Sarim Preat	F	1	-	-	-	-
85	Krie Peun	M	-	-	-	10	-
86	Chroung Roungear	M	-	-	-	3	-
87	Khak Korteang	M	-	-	-	-	-
88	Kakrang Kanha	M	4	-	-	10	-
89	Chhi Kadong	M	-	-	1	-	-
90	Lmien Bin	M	-	-	-	-	-
91	Chuon Nheam	M	1	-	-	10	-
92	Teng Khlob	F	-	-	-	-	-
93	Khlo Beut	M	-	-	-	-	-
94	Voeung Yum	M	7	-	-	20	-
95	Yoeung Thoeun	M	-	-	-	-	-
96	Chak Romtiet	F	-	-	-	5	-
97	Treng Bier	F	-	-	-	-	-
98	Tuot Chreng	M	-	-	1	3	-
99	Som Nang	F	-	-	-	-	-
100	Van Chantha	M	-	-	-	5	-
101	Kham Khoun	M	-	-	-	10	-
102	Haen Ny	M	-	-	-	15	-
103	Vy Sarin	M	-	-	-	-	-
104	Len Sophea	F	-	-	-	-	-
105	Eng Try	M	-	-	-	20	-
106	Ngen srleng	F	-	-	-	-	-
107	Seipu Daw	M	-	-	-	50	-
108	Muong Peak	F	9	-	-	3	-
109	khaun kanhna	M	-	-	-	18	-
Total			105	1	37	720	19

Annex 4.6: Training Needs Assessment Codes

1. Crops Production's codes	
Code 1	Cultivation techniques (soil preparation, net house preparation, seed selection, irrigation preparation)
Code 2	An understanding the use of pesticides and fertilizers and technical standards
Code 3	Breeding or grafting techniques (including cashews, cassava, etc.)
Code 4	Integrated Pest Management (IPM) techniques and treatments on various crops
Code 5	An understanding of safe vegetables and safe vegetable growing techniques
Code 6	An understanding of organic crops and organic farming techniques
Code 7	An understanding of planting techniques in line with Good Agricultural Practices (GAP)
Code 8	An understanding drip irrigation and sprinkler irrigation
Code 9	Organizing production groups or farming communities and other related work
Code 10	Agricultural business planning preparation
2. Nutrition Sensitive Agriculture's Codes	
N 1	Training on food safety and nutrition
N 2	Training on agricultural product processing and preservation technology
N 3	Training on promoting gender equality and women's nutrition
N 4	Training on intensive agriculture and agricultural diversification
N 5	Training on hygiene and food hygiene practices
N 6	Training on home school garden and food safety education for school children
N 7	Training on communicable diseases pandemic, health effects and nutrition
N 8	Training on fundamental basics of nutrition
N 9	Training on gender equity, women's leadership and agricultural works
N 10	Training on post-harvest of nutrition losses in value chain
N 11	Training on strategy and multi-sectors on malnutrition interventions
N 12	Training on food fortification
N 13	Training on post-harvest safe handling
3. Contract Farming Implementation's Codes	
CF 1	Training on general guideline of contract farming
CF 2	Training on monitoring and verification of relevant documents during implementing the contract farming
CF 3	Training on quality control and preparation
CF 4	Training on development of human resource training plan and partiKIPation in the implementation of contract agricultural production
CF 5	Training on procedure for requesting and preparation of relevant documents requesting the implementation of contract farming
CF 6	Training on dispute resolution in contract farming
CF 7	Training on packaging and labeling
CF 8	Training on market access and smallholder farmers' connectivity
CF 9	Training on the concept of agri-business cluster

Annex 4.7: Questionnaire of Beneficiary Profile Form

A. To be completed by interviewer

1. Name:, Gender: ☐ Male ☐ Female
2. Interview date (DD/MM/YY):
3. Location:(village),(commune),(district),(Province).
4. Phone number: and

B. To be completed by interviewee

Part I: General information

1. Name:, Gender: ☐ Male ☐ Female
2. Indigenous People: ☐ Tompoun ☐ Pou Nong ☐ Mil ☐ Prov
☐ Other:
3. Family status: ☐ Single ☐ Marriage ☐ Divorce ☐ Separate
4. Children: (People) (Son: (People), Daughter: (People).
5. Children who are studying:
 - ❖ Kindergarten: (People) (Son: (People), Daughter: (People).
 - ❖ Primary school: (People) (Son: (People), Daughter: (People).
 - ❖ Secondary school: (People) (Son: (People), Daughter: (People).
 - ❖ High school: (People) (Son: (People), Daughter: (People).
 - ❖ Technical school: (People) (Son: (People), Daughter: (People).
 - ❖ Undergraduate: (People) (Son: (People), Daughter: (People).
6. Children who stop study: (People) (Son: (People), Daughter: (People).
7. Under-age school children: (People) (Son:(People), Daughter: (People).
8. Agriculture labor force: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

9. Have you applied to the LASED III project already in term of agricultural support? ☐ Yes ☐ No

No

10. Have you participated in dissemination already? ☐ Yes ☐ No

11. Which institutions provide the dissemination?

☐ Ministry of Agriculture, Forestry and Fisheries

☐ Ministry of Land Management, Urban Planning and Construction

☐ Provincial Department of Agriculture, Forestry and Fisheries

☐ Provincial Department of Land Management, Urban Planning and Construction

☐ Local authority

☐ Other:

Part II: Agricultural potential

2.1 Industrial crops

2.1.1 Cashew tree ☐ Yes ☐ No (If so, please verify below:)

☐ Younger than the harvest year

☐ No land to grow

☐ Land not yet cleared

☐ Other:

2.1.1.1 Cashew production: (h.a), Yield: (t), Price:
(Riel/kg)

2.1.2 Cassava: (h.a)

2.1.2.1 Quantity sell: (h.a), Fresh cassava's price:
(Riel/kg)

2.1.2.2 Quantity sell: (h.a), Dried chip cassava's price:
(Riel/kg)

2.1.3 Rubber: (h.a), Yield: (t), Price: (Riel/kg)

2.1.4 Rice: (h.a), Yield: (t), Have you sold the rice? ☐ Yes ☐ No (Please verify)

☐ Only household consumption

☐ Also sold some

☐ No land to grow

☐ Land not yet cleared

☐ Other:

2.1.4.1 Sold quantity: (h.a), Yield: (t), Price: (Riel/kg)

2.2 Horticulture

2.2.1 Vegetable: (h.a), Yield: (t), Price: (Riel/kg)

2.2.2 Fruits tree: (h.a), Yield: (t), Price: (Riel/kg)

2.3 Challenges

2.3.1 What is the condition of your land? ☐ Good ☐ Average ☐ Bad

2.3.2 Challenges

Choose any answer you come across Please tick (✓) on the only answer! Level 1 is not strongly challenged to level 5 is strongly challenged	1	2	3	4	5
Drought					
Diseases on other crops					
Lack of techniques in cultivation					
Lack of labor to support agricultural work					
Lack of capital					
Lack of sales' market					
Lack of agricultural inputs (fertilizers and pesticides, seeds, etc.)					

2.4 Livestock ☐ No ☐ Yes (If so, please verify below:)

2.4.1 Cow:, Buffolo:, Pig:, Chicken:, Duck:, Other:

2.4.1.1 Cow's sell quantity:, Total price: (Riel)

2.4.1.2 Buffolo's sell quantity:, Total price: (Riel)

2.4.1.3 Chicken's sell quantity:, Total price: (Riel)

2.4.1.4 Duck's sell quantity:, Total price: (Riel)

2.4.1.5 Other:, Total price: (Riel)

2.4.2 Challenges

Choose any answer you come across Please tick (✓) on the only answer! Level 1 is not strongly challenged to level 5 is strongly challenged	1	2	3	4	5
Drought					
Other animal diseases					
Lack of technique in raising					
Lack of labor to raise livestock					
Lack of capital for animal husbandry raising					

Lack of sales' market					
Lack of production inputs (food, vaccines, veterinary drugs, etc.)					

2.5 Aquaculture (raising fish, frogs, eels, snakes, etc.)

2.5.1 Do you do aquaculture? ☐ No ☐ Yes (If so, please verify below)

2.5.2 Sell quantity: (kg), Price: (Riel/kg)

2.5.3 Do you want to do aquatic farming? ☐ Yes ☐ No (If so, please verify below)

2.5.4 Please provide your reasons why do not want to do the aquatic farming:

.....

2.6 Markets

2.6.1 Who do you sell your agricultural products to?

- ☐ Processing company
- ☐ Medium or large broker in local or province
- ☐ Village collectors
- ☐ Agricultural cooperative to which it is a member (If the respondent is a member of the agricultural cooperative)
- ☐ Others (Please specify:)

2.6.2 Where do your buyers bring your agricultural products to?

- ☐ Export abroad (usually exported to Vietnam)
- ☐ Local processing
- ☐ Resale to exporters (usually exported to Vietnam)

2.6.3 Where sources do you know the price of agricultural products from?

- ☐ By phone
- ☐ By telegram
- ☐ Direct contact with local buyers (Establish a regular quote team)
- ☐ By relevant ministries and institutions
- ☐ By organizing a matching forum from relevant ministries and institutions

2.6.4 Have you ever attended a contract farming training course?

- ☐ No
- ☐ Yes

2.6.5 Which ministry or institution is organized by?

- ☐ Provincial Department of Agriculture, Forestry and Fisheries

- ☐ Department of Agro-Industry
- ☐ NGOs
- ☐ Private sector engaged in contract farming

2.6.6 Transportation

- ☐ Bulldozer ☐ Tractor ☐ Motorcycles ☐ Horse-drawn carriage ☐ Car

2.6.7 Challenges

- ☐ Low selling price
- ☐ Lack of buyers
- ☐ Lack of market information
- ☐ Lack of drying facilities
- ☐

Other:

(Specify.....)

2.7 Agricultural economic analysis (Annual)

2.7.1 Total income from agriculture (Riel)

2.7.2 Total expenditure on agricultural production (cultivation, aquaculture, etc.)
(Riel)

2.7.3 Non-agricultural work ☐ No ☐ Yes (Please specify:.....)

2.7.4 Non-agricultural income (Please specify:.....) (Riel)

2.7.5 Expenses and income: ☐ Enough ☐ Not enough

2.7.6 How many months do you estimate the shortage (in days / months)?

2.8 Extension and Information Technology

2.8.1 Have you ever attended a short course in agricultural skills? ☐ Yes ☐ No

2.8.2 Training by which party:

.....
.....

2.8.3 Do you have a cell phone? ☐ Yes ☐ No

2.8.4 Total number of phones: (Units) 4.1 Smart phones units

2.8.5 Have you ever used a smartphone to learn agricultural techniques? ☐ Yes ☐ No

2.8.6 Have you ever used a smartphone to buy or sell agricultural products? ☐ Yes ☐ No

2.9 Community infrastructure

2.9.1 Rubber road number: (Line), Length: (Km)

2.9.2 Road number: (Line), Length: (Km)

2.9.3 Red gravel road number: (Line), Length: (Km)

- 2.9.4 Lake , Size: (Cubic meter)
- 2.9.5 River , Length: (Km)
- 2.9.6 School (Building)
- 2.9.7 Health Center (Building)

2.10 Training Needs Assessment

A. Animals and Livestock Production

Please select the training course below, giving priority by ticking (✓)						
Techniques/Animals	Cow	Buffalo	Pig	Chicken	Ducks	Other
Animal husbandry feeding						
Breeding						
Feeds making						
Vaccination						
Disease treatment						
Production preparation (Cage)						
Business planning preparation						
Others						

B. Aquaculture

Please select the training course below, giving priority by ticking (✓)					
Techniques/Aquaculture	Cat fish	Frog	Eel	Others	Others
Raising in plastic bags					
Breeding					
Feeds making					
Vaccination					
Disease treatment					
Production preparation (Reservoir)					
Business planning preparation					
Others					

C. Crops Production

Please select the training course below, giving priority by ticking (✓)

- ☐ Cultivation techniques (soil preparation, net house preparation, seed selection, irrigation preparation)
- ☐ An understanding the use of pesticides and fertilizers and technical standards
- ☐ Breeding or grafting techniques (including cashews, cassava, etc.)
- ☐ Integrated Pest Management (IPM) techniques and treatments on various crops
- ☐ An understanding of safe vegetables and safe vegetable growing techniques
- ☐ An understanding of organic crops and organic farming techniques
- ☐ An understanding of planting techniques in line with Good Agricultural Practices (GAP)
- ☐ An understanding drip irrigation and sprinkler irrigation
- ☐ Organizing production groups or farming communities and other related work
- ☐ Agricultural business planning preparation

D. Nutrition Sensitive Agriculture

Please select the training course below, giving priority by ticking (✓)

- ☐ Training on food safety and nutrition
- ☐ Training on agricultural product processing and preservation technology
- ☐ Training on promoting gender equality and women's nutrition
- ☐ Training on intensive agriculture and agricultural diversification
- ☐ Training on hygiene and food hygiene practices
- ☐ Training on home school garden and food safety education for school children
- ☐ Training on communicable diseases pandemic, health effects and nutrition
- ☐ Training on fundamental basics of nutrition
- ☐ Training on gender equity, women's leadership and agricultural works
- ☐ Training on post-harvest of nutrition losses in value chain
- ☐ Training on strategy and multi-sectors on malnutrition interventions
- ☐ Training on food fortification
- ☐ Training on post-harvest safe handling

E. Contract Farming Implementation

Please select the training course below, giving priority by ticking (✓)

- ☐ Training on general guideline of contract farming
- ☐ Training on monitoring and verification of relevant documents during implementing the contract farming

- ☐ Training on quality control and preparation
- ☐ Training on development of human resource training plan and participation in the implementation of contract agricultural production
- ☐ Training on procedure for requesting and preparation of relevant documents requesting the implementation of contract farming
- ☐ Training on dispute resolution in contract farming
- ☐ Training on packaging and labeling
- ☐ Training on market access and smallholder farmers' connectivity
- ☐ Training on the concept of agri-business cluster

Annex 4.8 Additional questions

I. Agriculture Cooperative

1. Does your indigenous community establish the agriculture cooperative?

- ☐ No
- ☐ Yes (Please specify in the following question)

2. What is the name that agriculture cooperative?

.....

3. How many members in that agriculture cooperative? (Please attach the photo, if applicable)

Amount of member: (Number of women:)

4. What careers does that agriculture cooperative do?

.....

5. What challenges does that agriculture cooperative come across?

.....

II. Producer Group

6. Does your producer group establish the agriculture cooperative?

- ☐ No
- ☐ Yes (Please specify in the following question)

7. What is the name that producer group?

.....

8. How many members in that producer group? (Please attach the photo, if applicable)

Amount of member: (Number of women:)

9. What careers does that producer group do?

.....

.....

.....

.....

.....

10. What challenges does that producer group come across?

.....

.....

.....

.....

.....

III. Revolving Funds Group

11. Does your revolving funds group establish the agriculture cooperative?

- ☐ No
- ☐ Yes (Please specify in the following question)

12. What is the name that revolving funds group?

.....

13. How many members in that revolving fund group? (Please attach the photo, if applicable)

Amount of member: (Number of women:)

14. What careers does that revolving funds group do?

.....

.....

.....

.....

.....

15. What challenges does that revolving funds group come across?

.....

.....

.....

.....

.....

IV. Other Farmer Group

16. Does your other farmers group establish the agriculture cooperative?

- ☐ No
- ☐ Yes (Please specify in the following question)

17. What is the name that other farmers group?

.....

18. How many members in other farmers group? (Please attach the photo, if applicable)

Amount of member: (Number of women:)

19. What purposes do that other farmer groups do?

.....

.....

.....

.....

.....

20. What challenges does that revolving funds group come across?

.....

.....

.....

.....

.....

21. In order to develop the agriculture cooperative/producer group/revolving funds group, what do you want LASED III project support?

- ☐ Education and training
- ☐ Financial support
- ☐ Business agreement making
- ☐ Contract Farming making
- ☐ Facilitate the private and development partner in the local

- ☐ Physical infrastructure support
- ☐ Other (Please specify:)

V. Fisheries

22. Do you catch fishes traditionally?

- ☐ No
- ☐ Yes (Please specify in the following question)

23. How much do you earn from the traditional fishing?

Please specify: (Riel)

24. Do you spend on traditional fishing materials?

- ☐ No
- ☐ Yes (Please specify in the following question)

25. How much do you spend it?

Please specify: (Riel)

Thank you!