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**AERD**  
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## Report

# "Personal and Household's Debt in Chhaeb, Kulen Promtep, Prey Preah Rokha Wildlife Sanctuaries, Preah Vihear Province"



Written by: Phoeurk Raksmei  
Sok kimchhin  
Chou Phanith  
Nhean Sophea  
Mam Rathmono  
Sinh Sreypich  
Thon Chhean

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## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	1
<b>LIST OF FIGURES</b> .....	3
<b>LIST OF TABLES</b> .....	3
<b>LIST OF ABBREVIATIONS</b> .....	4
<b>I. INTRODUCTION</b> .....	5
<b>II. OBJECTIVES AND RESEARCH QUESTIONS\</b> .....	8
<b>III. METHODOLOGY</b> .....	10
<b>3.1 Site Selection</b> .....	10
<b>3.2 Data collection</b> .....	10
<b>3.3 Data analysis</b> .....	15
<b>IV. RESULTS</b> .....	16
<b>4.1 Characteristics of interviewees</b> .....	16
<b>4.2 Livelihood and income sources</b> .....	17
<b>4.3 Typical individual debt levels</b> .....	21
<b>4.4 Purposes of Loan</b> .....	23
<b>4.5 Success of Using Loan</b> .....	23
<b>4.6 Loan Sources and its Characteristics Observed</b> .....	25
<b>4.7 Average Debt Service Coverage Ratio (DSCR)</b> .....	28
<b>4.8 Status of land dynamic and loan access in the landscapes</b> .....	29
<b>4.9 Stakeholders analysis</b> .....	33
<b>V. CONCLUSIONS (KEY MESSAGES)</b> .....	36
<b>VI. RECOMMENDED INSTITUTION FOR OPERATING MICROCREDITS</b> .....	39
<b>VII. LIMITATIONS</b> .....	40
<b>REFERENCES</b> .....	41
<b>APPENDIX</b> .....	43

## LIST OF FIGURES

<b>FIGURE 1.</b> RETRIEVED FROM MICROFINANCE AND HOUSEHOLD WELFARE (PIMHIDZAI ET AL. 2019) .....	7
<b>FIGURE 2.</b> THE MAP DETAILING OF THE STUDY AREAS WITHIN PREAH VIHEAR PROVINCE .....	10
<b>FIGURE 3.</b> FREQUENCY OF SMP MEMBER AND NON-MEMBER PARTICIPATED IN INTERVIEWS .....	16
<b>FIGURE 4.</b> GENDER PARTICIPATION PROPORTION .....	16
<b>FIGURE 5.</b> FAMILY SIZE OF ACTIVE MALE AND FEMALE MEMBERS .....	17
<b>FIGURE 6.</b> SOURCES OF LIVELIHOOD IN THE STUDY AREAS COMPILED INTO FOUR MAIN TYPES .....	17
<b>FIGURE 7.</b> AVERAGE INCOME FROM DIFFERENT SOURCES PER YEAR .....	18
<b>FIGURE 8.</b> PROPORTION OF CROP TYPES FARMERS DEPEND UPON WITHIN THE STUDY AREAS (LEFT) AND RICE VARIETIES (RIGHT) .....	18
<b>FIGURE 9.</b> LIVESTOCK DEPENDENCE AS REPORTED BY RESPONDENTS .....	19
<b>FIGURE 10.</b> NON-TIMBER FOREST PRODUCTS (NTFPs) .....	20
<b>FIGURE 11.</b> OFF AND NON-FARM ACTIVITIES .....	21
<b>FIGURE 12.</b> SIZE OF LOAN OF SMP MEMBER AND NON-MEMBER.....	22
<b>FIGURE 13.</b> SIZE OF LOAN IN EACH VILLAGE.....	22
<b>FIGURE 14.</b> SIZE OF LOAN COMPARED WITH SIZE OF LAND CATEGORY .....	22
<b>FIGURE 15.</b> PURPOSES OF LOAN USAGE AS REPORTED BY RESPONDENTS CATEGORIZED INTO MEMBER AND NON-MEMBER. ....	23
<b>FIGURE 16.</b> REPORTED LOAN SUCCESS RATE .....	24
<b>FIGURE 17.</b> CONFIRMATION ON ACHIEVING OF FARMERS' USING LOAN IN EACH CATEGORY .....	25
<b>FIGURE 18.</b> SOURCES OF LOAN PROVIDERS.....	26
<b>FIGURE 19.</b> COLLATERAL USED FOR LOAN ACCESS.....	27
<b>FIGURE 20.</b> AVERAGE DEBT SERVICE COVERAGE RATIO (DSCR).....	29
<b>FIGURE 21.</b> SIZE OF LAND OWNED BY MEMBER AND NON-MEMBER (LEFT) AND BY RESPONDENTS BY EACH VILLAGE (RIGHT) .....	30
<b>FIGURE 22.</b> LAND EVOLUTION AS REPORTED BY RESPONDENTS (LEFT) AND PEAK YEAR OF INCREASING (RIGHT).....	30
<b>FIGURE 23.</b> PERCEPTION TOWARDS DEBT IN GENERAL .....	31
<b>FIGURE 24.</b> PERCEPTION ON LOAN TOWARDS LIVELIHOOD.....	32
<b>FIGURE 25.</b> IDENTIFIED KEY ACTORS OF LOAN OPERATION IN THE TARGETED AREAS .....	33
<b>FIGURE 26.</b> RECOMMENDED INSTITUTION FOR OPERATING MICROCREDITS.....	39

## LIST OF TABLES

<b>TABLE 1.</b> SELECTED STAKEHOLDER FOR KEY INFORMANT INTERVIEW .....	12
<b>TABLE 2.</b> NUMBERS OF PARTICIPANTS IN FOCUS GROUP DISCUSSION (FGDs) .....	12
<b>TABLE 3.</b> INSTRUMENT DESIGN FOR DATA COLLECTION WITH HOUSEHOLD SURVEY .....	13
<b>TABLE 4.</b> NUMBER OF SAMPLED HOUSEHOLDS INTERVIEWED IN EACH VILLAGE .....	14
<b>TABLE 5.</b> INTEREST RATES PROVIDED BY AND THE RANGE OF LOAN DURATION OBSERVED FROM LOCAL MFI/BANK.....	28
<b>TABLE 6.</b> PERCEPTION ON FACTORS IMPACT ON LAND ENCROACHMENT.....	32

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## LIST OF ABBREVIATIONS

DSCR	: Debt Service Coverage Rates
ELC	: Economic Land Concession
FGD	: Focus Group Discussion
KII	: Key Informant Interview
SMP	: Sansom Mlup Prey
SLC	: Social Land Concession

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## I. INTRODUCTION

Living in a country rich in natural resources, the population of Cambodia is able to sustain its livelihood and the country's economy through the interaction it has with its forest. By depending on such vast resources, millions of Cambodians are supplied with energy, food, water and income-generating activities. In spite of these benefits – known as ecosystem services – Cambodia's natural resources are threatened by deforestation driven by development processes (**Chou P, 2019**). Consequently, the national forest area has declined from 73% in 1964 to only 46% in 2018. Currently, illegal encroachment on protected forest land continues to increase, while there has been successful action to prevent large-scale timber logging (REF?). Neth Pheaktra, a spokesman of the Ministry of Environment, attributes this decline to many reasons, including agriculture (**Kongnov, 2020**).

While commercial farming provides people with the opportunity to improve their standard of living, economic growth without sustainability of natural resources and ecosystems weakens a country's functionality and increases vulnerability among the poor (**Watkins et al., 2016**). Agriculture is one of the leading factors in environmental degradation, notably through the clearance of forest in order to expand agricultural production (**Tucker, 2015**). Although improvement of agricultural techniques and increasing adoption of new technologies could gradually decrease deforestation (**Abman and Carney, 2020**), other factors may further drive deforestation, including agricultural intensification, land expansion, debt pressure and unemployment (**Bateman 2010, Watts 2013, Iftekhar and Hoque, 2005**).

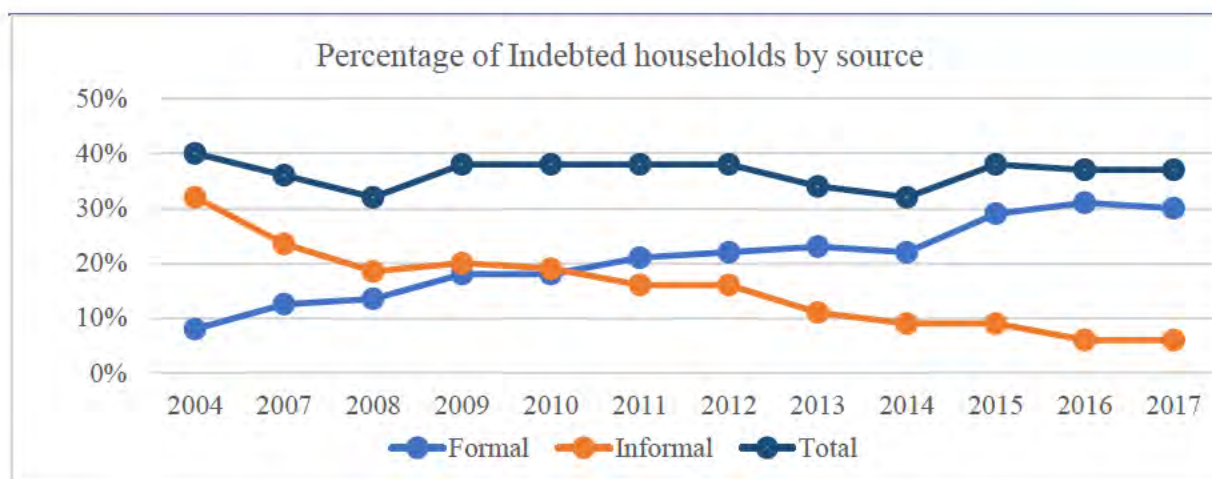
Microcredit in Cambodia has emerged within this last 20 years, and it is likely contributed to livelihood development (Pimhidzai et al. 2019). Despite this claim, there are a lot of concerns occurring from microcredit as the driving force for biodiversity and rural livelihoods (Bateman, 2010). However, there are concerns the microcredit sector could unknowingly increase the threat posed by farmers to biodiversity and hinder conservation efforts. An important role of microfinance institutions (MFIs) is to provide financial support to those in need, while guaranteeing a more secure form of loan compared to informal sources (**Pimhidzai, et al., 2019**). Despite such positive objectives, **Bateman (2010)** instead argues that “microfinance is largely antagonistic to sustainable economic and social development, and thus also to sustainable poverty reduction”. He underlines negative effects caused by microfinance, such as over-indebtedness, inadequate investment validation and a lack of awareness of financial services, that may lead to the destruction of the potential for sustainable local economic and social development. However, the most concerning environmental challenge caused by indebtedness may be the relationship between farmers' decisions around their debt repayment and the effects these decisions have on the environment. In a study in northern Nigeria, **Watts (1983, 255)** found that debt owed by farmers to lenders (mostly merchants) pushed for greater production in their farm yield, “a reproduction squeezes”. Farmers were found to be heavily dependent on market prices when their crops were commodified. In the event of a price drop, their only option to generate income – without losing capital – was to overwork their land to produce more crops. This led to land exhaustion and a decrease in soil productivity, while their debts and taxes remained fixed. Other environmental issues that could be caused by indebtedness are the depletion of groundwater used for growing crops (**Taylor, 2013**) or the need for greater use of environmentally harmful pesticides (**Gray and Dowd-Urube, 2013**).



With such issues concerning not only the economic well-being of farmers, but also microcredit as a whole and its potential environmental impacts, this research aims to investigate the role of the microcredit sector in indebtedness and landscape change in Preah Vihear province. This research was commissioned by Sansom Mlup Prey (SMP), a local Cambodian NGO focusing on sustainable agriculture to support wildlife conservation. SMP aims to develop wildlife-friendly, sustainable and high-value agricultural products in partnership with communities located in Cambodian protected areas. SMP's vision is to link improved livelihoods with wildlife conservation, sustainable development, and climate resilience. To achieve this, SMP is working to build capacity of agricultural technical support to farmers living in and around seven wildlife sanctuaries across four provinces (Preah Vihear, Stung Treng, Monduliri and Kampong Thom). The Northern Plains landscape where SMP works in Preah Vihear encompasses Kulen Promtep, Chheb and Prey Preah Rokha Wildlife Sanctuaries. The project aims improve understanding of personal debt, microfinance and decision for communities living inside these protected areas.

Forest land in Cambodia has been degraded by large-scale infrastructure projects, timber production, illegal logging, agricultural land expansion, and other development activities (*Milne et al, 2015*). This degradation weakens the provision of ecosystem services and increases vulnerability among poor communities, especially those extracting non-timber forest products and farmers who depending on traditional farmland for livelihoods (*Watkin et al, 2016*). Cambodia has made considerable efforts to address the issue of deforestation, but the government continues to face many challenges. The first challenge is that investment in forest conservation can be very costly (*Green et al, 2018*) and the government lacks the financial resources and capacity to manage their nation's biological resources in an optimal way (*Neumann et al, 1996*). A further challenge lies in restricting use of forest resources, while minimizing disruption to local livelihoods (*Ruiz-Pérez et al, 2005*).

Microfinance was originally defined as “the provision of tiny loans to poor individuals who establish or expand a simple income-generating activity, thereby supposedly facilitating their eventual escape from poverty.” (**Bateman, 2010**). Its objective is to offer small loans at relatively low interest rates, directly creating jobs and raising the income for the poor, thereby improving their socio-economic welfare. This makes the provision of microfinance by MFIs compatible with the economic situation of Cambodia, a country open to trade and financial flows. The MFIs sector in Cambodia has increasingly provided borrowers, who otherwise depended on informal sources, access to formal credit (Figure 1). The proportion of households borrowing from informal sources decreased from 32 percent in 2004 to less than 6 percent in 2017. In contrast, borrowing from formal sources increased from 8 percent to 30 percent over the same period. This indicates the important role of MFIs in providing financial support to those in need.



**Figure 1.** Retrieved from Microfinance and Household Welfare (Pimhidzai et al. 2019)

Nevertheless, microfinance can also have adverse effects. This is particularly in evidence in Cambodia, where the ratio of outstanding debt to consumption has risen from 11 percent in 2010 to 33 percent in 2017, a triple-increase in just 8 years (REF). Such a significant increase in the level of outstanding debt has raised a crucial concern over the capacity of borrowers to repay their debt (Pimhidzai, et al., 2019). Furthermore, there is also concern that borrowed loans are increasingly being used toward consumptive needs that do not generate income. Loans used for agricultural and non-agricultural activities decreased from 47 percent in 2004 to 29 percent in 2017 (Pimhidzai, et al., 2019).

Financial illiteracy is also a major concern, as it could potentially place significant debt pressure on poor farmers, which could further drive them to extractive income generating activities, such as clearing forest land for agriculture. A 2014 Survey found that only 18 percent of Cambodians could correctly answer three out of four basic financial literacy questions related to risk diversification, inflation, numeracy, and compound interest (SP Global FinLit, 2014). A study in Kampong Thom province found that farmers accessed loans from multiple different sources, including MFIs, banks, self-help groups (SHG), relatives, private money lenders, agricultural cooperatives, Tontine<sup>1</sup>, and merchants. The study also found that an average household has more than 3 loans and 43% of loans were from the formal sector, while 57% were from the informal sector (Martin, 2020). The study also found that, in terms of loan productivity, only 23 percent of the total loan share was used productively (i.e. to enhance productive activities), while 77% was unproductive (i.e. to meet consumptive needs or respond to emergency situations). As the microfinance sector has expanded, its offer and diversity has broadened as well, especially in terms of unproductive loans. For example, most MFIs now also offer loans to improve housing or purchase vehicles (Martin, 2020). Pimhidzai et al. (2019) also report a nationwide decrease in loans used for agriculture and non-agricultural activities in Cambodia from 47 percent in 2004 to 29 percent in 2017.

Agricultural agrarian change may cause by the burden of finance farmers faced due to indebtedness. This is largely due to the face that in the cases of commodified agricultural production, social differentiation could occur through property ownership restructuring and hierarchy reinforcement (Wood, 2002). When the costs of farm production are beyond control, farmers may be inclined to sell their land to repay their

<sup>1</sup> It is a fund revolving mechanism among members of informal saving group. A member can borrow money from the group by bidding interest rates.



debt (**Banaji, 1977**). Alternatively, for farmers with more capacity, assets, or access to markets, debt may be a leverage to make productive investments (**Hall et al., 2011**).

**Green (2020)** reported a dynamic spiral of indebtedness that led to significant change in agricultural practices, notably the application of chemical inputs. In this study, over-indebtedness was found to have caused significant demographic change resulting in decreased agricultural labor due to the burden of seeking additional income to repay debt and the search for additional opportunities in a nearby city. This shortage of labor pushed farmers to become almost entirely dependent on hiring farm machinery. This was found to have further pushed borrowers into further debt to hire machinery, creating a debt spiral that was very difficult to escape from (**Green, 2020**). However, the most detrimental consequence to the environment resulted from the transition from the traditional rice transplanting to seed broadcasting driven by reduced labor availability. This transition meant that farmers became solely dependent on chemical inputs to achieve a similar yield to the transplanting system (**Green, 2020**).

The expansion of microcredit, especially in rural Cambodia, has also enabled, promoted, and sustained migration to foreign countries (**Bylander 2014**). **Bylander (2014)** found that the entry of MFIs into the Chanleas Dai area led to increased access to and use of low-cost credit. Potential migrant workers need capital either for short-term investment or to meet the costs of migration itself, while some migrate to search for work to pay off their loan. This has led to increased competition between money lending services, both MFIs and informal lenders in the region. With the addition of an interest rate as low as 3 percent in order to compete, MFIs may unknowingly support - even compel in some cases - migration for work outside Cambodia (**Bylander 2014**).

## II. OBJECTIVES AND RESEARCH QUESTIONS

The overall aim of the study was to profile household debt (both formal and informal) in communities in the Northern Plains and identify opportunities to engage with lenders to alleviate debt-pressures on land use.

This was broken down into four main objectives, assessed through the following research questions:

- Profiling stakeholders/providers most prevalent in the landscape and describing their operating models;
  - Who are the main lenders and sources of loans in the Northern Plains?
  - What kinds of products do these lenders offer?
  - How do these lenders promote their products in the Northern Plains?
  - How do these lenders enforce repayments in the villages?
  - Which actors in the village are involved in supporting these activities?
- Analysis of typical individual debt levels (as well as extremes), purpose of loans, quality of credit assessments and default rates with documented anecdotal examples;
  - What are typical levels of household debt?
  - What are levels of extreme debt?
  - What are the households' characteristics effects to extreme debt?
  - What are the loans used for by households?
  - What collateral is used by households?
  - What is the default rate?

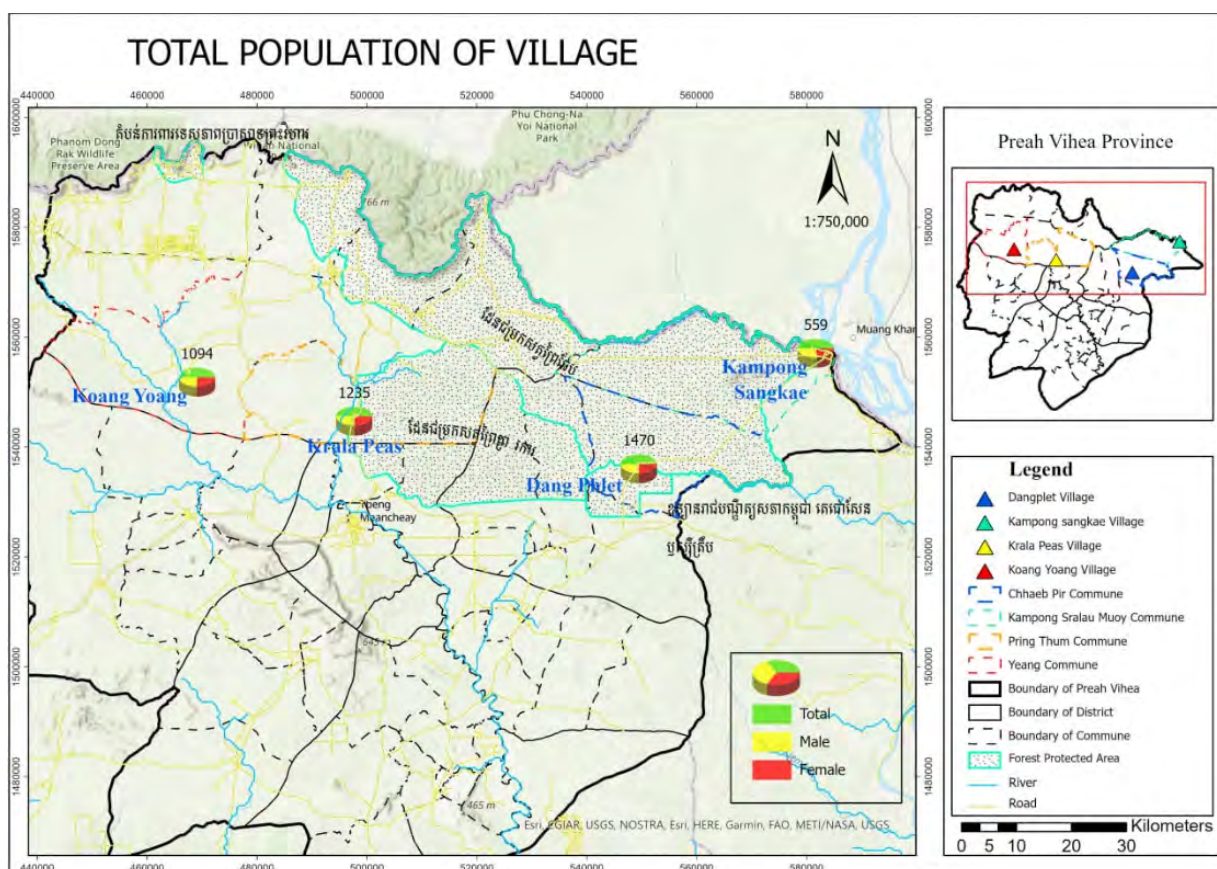


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- What credit assessments were undertaken and what was their quality?
  - Assessment on typical debt burden of communities of the targeted areas in Chaeb and Chaom Ksan through available data and potential impact on livelihood decisions based on interviews;
    - What are productive agricultural loans used for?
    - What effects does debt burden have on livelihood choices?
    - What effects do defaults have on households?
    - What is the role of debt in changing land ownership?
    - What role does debt play in migration (both in and out of the study area)?
    - What kind of natural resources that farmers extract more intensive to pay for the debt?
  - Recommendations on possible engagement with lenders / MFI's to alleviate pressure on borrowers and add value to lenders through responsible business investment partners in community zones.

### III. METHODOLOGY

#### 3.1 Site Selection

The study focused on villages located in two wildlife sanctuaries: Chaeb Wildlife Sanctuary and Kulen Promtep Wildlife Sanctuary (**Figure 2**). Two villages were selected for inclusion in the study in each protected area: Dang Plet and Kampong Sangkae in Chheb Wildlife Sanctuary and Krala Peas and Kaung Yaung in Kulen Promtep Wildlife Sanctuary. All villages are included in SMP programmes allowing the study to investigate the characteristics and perspectives of participant and non-participant households. In addition, all four villages were selected to provide a mix of village characteristics to give a richer understanding of how debt varies across the landscape.



**Figure 2.** The map detailing of the study areas within Preah Vihear province

#### 3.2 Data collection

##### 3.2.1 Secondary Data Collection

Secondary data collection was used to provide contextual information about the study site regarding geography, land use and land cover change, drivers of land cover change, and household livelihoods and economic activities. This secondary data provided background understanding of the influence of households' characteristics on debt burden and pressures on forest.

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The principal sources of secondary data were as follows:

- a. **Literature review:** Information was collected regarding household livelihoods and the linkage between debt and natural resource management, particularly within Cambodia's protected area network.
- b. **Official reports and databases:** **Official** sources included data from the national database and official reports published by the Ministry of Planning (commune database 2019), Ministry of Agriculture, Forestry and Fisheries (agricultural cooperative database, ASPIRE business cluster, CIAS report 2019), Ministry of Economy and Finance (debt level and regulation of interest rate and security of loan) and Ministry of Environment (land use and land cover change, driving forces).

### 3.2.2 Primary Data collection

We conducted in two phases: an initial pilot to test the survey instruments and ensure that the questions were well understood, and the main survey implementation phase. The study followed a landscape reading approach for the pilot in which three main activities were tested: key informant interviews, focus group discussions (FGDs) and the questionnaire for household interviews. To collect primary data, we conducted key informant interviews with relevant stakeholders (KII), Focused Group Discussion with villager chief and villagers, households (please see the detailed information in the following sub-session).

#### *a. Key informant interview (KII)*

In total, key informant interviews were conducted with officials of four departments, including the Provincial Department of Agriculture, Provincial Department of Commerce, Provincial Department of Rural Development, Provincial Department of Environment, and Sansam Mlup Prey in order to understand loan usage and investigate linkages between debt and land encroachment within the study area. In addition, interviews were conducted with local authorities (the commune heads of Chheb 2, Kampong Sralao, and Pring Thum; village heads of Krala Peas, and Kaung Yaung villages), and local loan providers (Saving Group, Agricultural Communities, ACLEDA), in order to better understand the wider context of household debt in the study area. In total, 26 key stakeholders, including government and sub-national government, NGOs, development agencies, private sector microfinance institutes and private money lenders, were interviewed. The full list of key informants is shown in **Table 1**

All the interviews took place in the office of each department and organization and took approximately one hour and a half. These interviews focussed on department background and interventions regarding livelihoods and loan access, land dynamics and loan access in the province, the challenges and impacts of loan access and indebtedness. Key local stakeholders were also interviewed for in-depth information regarding the characteristics and perspectives of local people towards indebtedness and debt burden, as well as potential linkages between indebtedness possible land encroachment. Those main stakeholders included members of Agricultural Community and saving groups, and the heads of Krala Peas and Kaung Yaung villages. In addition, one main local loan provider – currently a representative of the Preah Vihear branch of ACLEDA Bank – was interviewed about the bank's operating model and the general situation of indebtedness through the lens of a loan provider.



**Table 1.** Selected stakeholder for Key Informant Interview

Department	Number of key persons who participated in the discussion
Provincial Department of Agriculture, Forestry and Fishery of Preah Vihear (Aspire <sup>2</sup> Project)	3
Provincial Department of Commercial (Aims <sup>3</sup> project)	2
Provincial Department of Rural Development	1
Provincial Department of Environment	3
Sansom Mlup Prey	4
Commune chief of Cheab II commune	1
Commune chief of Chaom Khsan commune	1
Commune chief of Kampong Sralao commune	2
Saving Group	2
Agricultural Community	5
Head of Krala Peas village	1
Head of Kaung Yaung village	1
Commune Chief of Yeang commune	1
Representative of ACLEDA Preah Vihear branch	2
<b>Total</b>	<b>29</b>

### **b. Focus Group Discussions**

The research team conducted four focus group discussion (FGDs), with two groups of community members that participate in SMP programmes and two groups of non-participants. Two FGDs were held in Dangplet village and two in Krala Peas village (Table 2). The discussions were initiated with our questionnaire guideline.

**Table 2.** Numbers of participants in Focus Group Discussion (FGDs)

Districts	Commune	Villages	FGD_with members	FGD_with non-mbmers
Chheb	Chhaeb II	Dangplet	7	9
Chaom Khsan	Pring Thum	Krala Peas	7	9

<sup>2</sup> Aspire project is a joined collaboration of MAFF and IFAD: <https://aspirekh.org/>

<sup>3</sup> Aims project is a government project: <https://aimsmoc.com/>



### *c. Household Survey*

Face-to-face semi-structured interviews were conducted with household representatives by a team of four enumerators and one field supervisor and took approximately one hour each. Three main criteria were used for household selection: participation in SMP programmes, current debt status and gender. The questionnaire included key indicators relating to household characteristics (see **Table 3**)

**Table 3.** Instrument design for data collection with household survey

Section	Module	Content of questions
<b>I. Respondent profile</b>	<ul style="list-style-type: none"> <li>Interviewee background</li> <li>Membership with SMP</li> </ul>	<ul style="list-style-type: none"> <li>Sex, age, status, education, occupation</li> <li>Reasons for participating in SMP programmes</li> </ul>
<b>II. Characteristic of Household</b>	<ul style="list-style-type: none"> <li>Profile of household members</li> <li>Land tenure</li> </ul>	<ul style="list-style-type: none"> <li>Age, sex, education, occupation, marital status</li> <li>Agricultural land area, residential land area;</li> <li>Means of accessing land</li> <li>Household land history               <ul style="list-style-type: none"> <li>Bought land</li> <li>Sold land</li> <li>Sold land linked with debt</li> </ul> </li> <li>Ownership and rental land</li> </ul>
<b>III. Domestic economy and assets of household</b>	<ul style="list-style-type: none"> <li>Household finances</li> <li>Household assets</li> <li>Asset for Agriculture</li> <li>Financial challenges – shocks in the past 5 years</li> </ul>	<ul style="list-style-type: none"> <li>Income sources (on-farm including crops and livestock, off-farm, non-farm)</li> <li>Household daily/annual expenses (food, school fee, ceremony, wedding, entertainment, disease treatment)</li> <li>Household hardship (disable, chronic disease)</li> <li>Number of equipment in the house (television, radio, karaoke system, motorbike, car)</li> <li>Number of large machinery (hand-tractor, tractor, harvesting machine) and main purpose of purchasing</li> <li>Shock or events leading to debt (sickness, production failure)               <ul style="list-style-type: none"> <li>Solution to deal with that issue</li> </ul> </li> </ul>
<b>IV. Microcredit access and strategy to deal with debt</b>	<ul style="list-style-type: none"> <li>Status of current loans</li> <li>Repayment ability/arrears</li> </ul>	<ul style="list-style-type: none"> <li>Number of loans, sources of loan, amount of each loan, interest rate/year, duration, purpose, collateral requirement</li> <li>Literacy of accessing loan</li> <li>Criteria of loan providers</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Strategies to access loans</li> <li>▪ Response to requirements for loan access</li> <li>▪ Decision making for selecting loan providers</li> <li>▪ Strategies to deal with debt</li> <li>▪ Perceptions on accessing loan for livelihood</li> <li>▪ Financial literacy</li> </ul>	<ul style="list-style-type: none"> <li>- Way of accessing to loan               <ul style="list-style-type: none"> <li>○ By individual/group</li> </ul> </li> <li>- Burden of debt, level of debt</li> <li>- Ways of dealing with debt               <ul style="list-style-type: none"> <li>○ Migration (seasonal, annual/short-term, long-term migration)</li> <li>○ Selling household assets (agricultural land, car)</li> <li>○ Land expansion for sale</li> </ul> </li> <li>- Level of loan contribution in improving the livelihood</li> <li>- Contribution and reason of improvement</li> <li>- Livelihood improvements due to loan access</li> <li>- Training/guidance about loan access and use</li> </ul>
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In total, approximately 20 interviews were conducted in each of the four villages, giving a total of approximately 80 households. Households were sampled using a purposive sampling method **Table 4**. Three main criteria were used for selecting the interviewee such as gender, women more preferable, membership of SMP, and household with debt/loan. Snowball sampling was conducted to identify appropriate households. Households with outstanding loans were identified by local individual who act to facilitate loan access between formal service providers and borrowers.

Lists of participants in SMP programmes were obtained from SMP representatives in each of the target villages. MFI agents in each village also provided additional confirmation about households with outstanding loans with MFIs.

**Table 4.** Number of sampled households interviewed in each village

Province	District	Wildlife Sanctuary	Village	Samples	
				Members of SMP	Non-Members
Preah Vihear	Chhaeb	Chhaeb	Dang Phlet	15	5
			Kampong Sangkae	9	9
	Chaom Khsan	Kulen Promtep / Prey Preah Rokha	Krala Peas	17	4
			Kaung Yaung	15	6

#### **d. Field Observation/Landscape Reading**

The research followed the Agrarian system analysis and diagnosis approach (**Barral, et al., 2012**). This approach provides a clear picture of the study areas, especially the existing natural resources, infrastructure, landscape topography, livelihood strategy and current status of microcredit. Within this framework, there are four main key questions: what, how, when and why. In addition to direct observation, 6 people were interviewed to collect data for comparison with initial research hypotheses and assumptions.

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### 3.3 Data analysis

All statistical analysis was completed using Microsoft Excel 2016 and SPSS version 20.

#### ❖ Debt Status Analysis

Extreme debt measurement is focused on some key elements as listed below were assessed using Excel to generalize the issue of debt level, purpose of loans, perception of credit accessibility, and default rate with documented.

A cluster analysis was conducted to classify the households' debt into three levels: low, moderate and high debt. This classification allowed us to assess the difference in households' characteristics and motivations for obtaining a loan.

As there are several definitions of over-indebtedness, the comparison between a total household's monthly income and total borrowing repayment was used to assess household debt burden.

The standard of debt level was reviewed from different sources, including the European Commission (2008), Cambodia National Bank, and relevant MFIs. In the study area, it was identified through key informant interviews. The simple formulation of pre-evaluation the ability of recovery the debt was applied.

$$\text{Formulation of DSCR} = \frac{\text{Net Operating Income}}{\text{Total Debt Service (principle and interest spense)}}$$

#### ❖ Typical debt burden of communities in KPWS

##### - Factor Analysis of land encroachment (Impact from debt)

To assess the main question of how debt pressure contributes to land encroachment in the landscap, we used two main tools: stakeholder analysis and Participatory Rural Appraisal (PRA).

Stakeholder analysis provided a clear image of the key stakeholders involved in household debt. This was visualized using Venn diagrams to illustrate interaction and influences between stakeholders (government, provincial departments, local communities, private sectors, development partners, NGOs, and scholars).

PRA was developed in order to identify the key factors influencing changes in natural resources. Three indicators were considered for each factor (magnitude of impact, speed (slow, gradually, rapid) and capacity to respond), each indicator rated from strong to low.

## IV. RESULTS

### 4.1 Characteristics of interviewees

A total of 56 participants and 34 non-participants of Sansom Mlup Prey programmes were interviewed. Among all respondents, 67.5% were women and 32.5% were men. Notably, In Kampong Sangkae is a new village for SMP, so there are not many members yet. In addition, we faced a challenge of communication because most of them speak only Laotian. Thus, the interviews could not fit the expected number and the number of women was low compared to the other villages thanks to cultural constraint, women were shy to discuss.

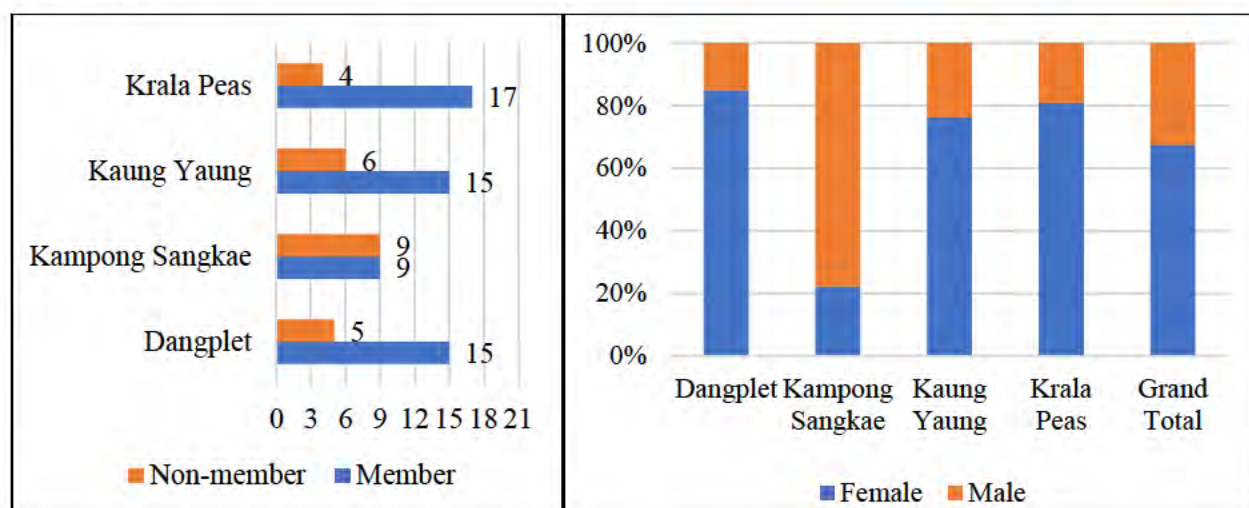


Figure 3. Frequency of SMP member and non-member participated in interviews

Figure 4. Gender participation proportion

The average respondent age was 41 (Std. deviation=12.5). The size of interviewed households ranged from 2 to 9 members (Figure 5). A large majority of respondents (81.3%) was born in the study villages. Among respondents who had migrated to the study villages, the most common occurrence – albeit at only 10.0% – was marrying into the village, followed by villagers who resettled in the study villages since 1979 after the collapse of the Khmer Rouge regime and to seek more arable land at 7.5% and 1.3% percent respectively. Additionally, people in the study villages were observed to have stronger familial and social connections with fellow villagers rather than outsiders, which appears to discourage villagers from out-migration. Villagers from Dangplet and Krala Peas villages are mostly Kuoy ethnicity, while people in Kampong Sangkae have close social and trading relations with the Lao people across the Cambodia-Lao border.

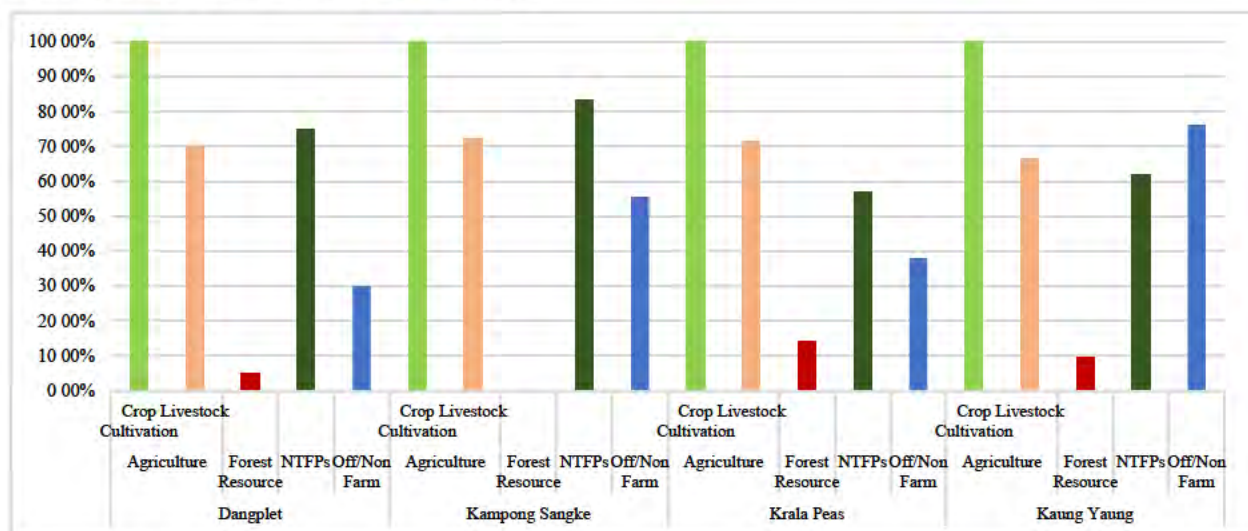




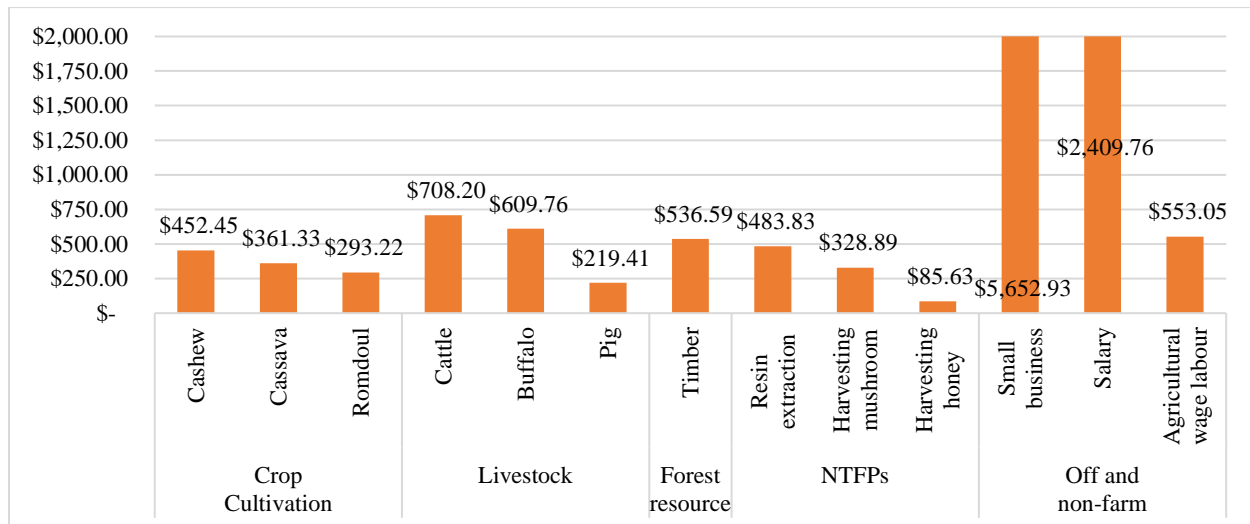
**Figure 5.** Family size of active male and female members

#### 4.2 Livelihood and income sources

Being situated in a forested area, respondents reported a varied source of income all year round (Figure 6). In addition to agriculture – which is the main income source throughout the landscape – NTFPs play an essential role in supporting people's livelihoods. Livestock husbandry is another important source of income. Although off-farm and non-farm activities are depended on by fewer respondents, they still provide an important source of income for 50% of respondent households. shows the sources of income villagers generally turns to in order to earn income when compiled into four main types, namely, agriculture, forest resource, NTFPs, and off/non-farm activities.



**Figure 6.** Sources of livelihood in the study areas compiled into four main types

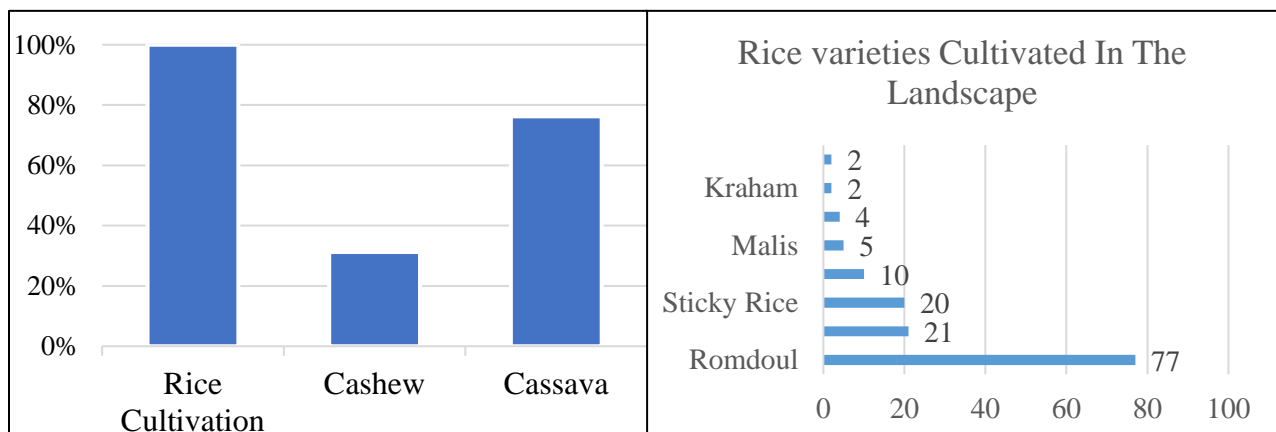


**Figure 7.** Average income from different sources per year

### *a. Agriculture*

#### *i. Crop Cultivation*

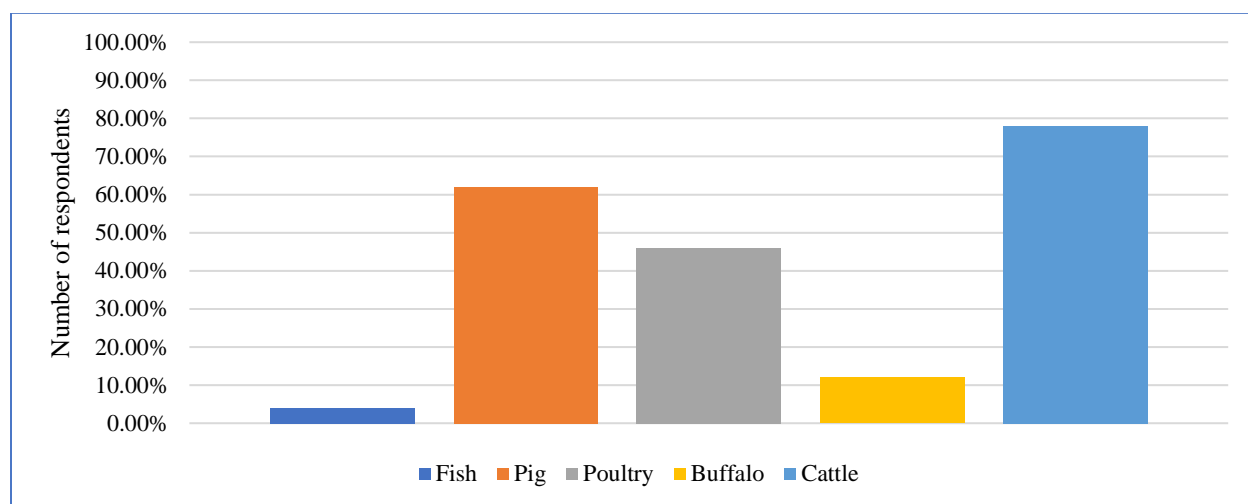
Rice remains the most important crop for farmers, serving as not only a source of income but an assurance to food security as well. All respondent households reported cultivating rice, confirming it as the most important crop within the study areas. However, the varieties of rice cultivated by farmers are diverse, ranging from aromatic rice varieties to non-aromatic and sticky rice. Romdoul is most common variety, which is cultivated mainly for selling and is the principal variety bought by SMP. One reason for this is its high price ranging from 1,000riel to as high as 1,800riel with an average net income of approximately 1.2 million riel per hectare (approximately 400USD). Romdoul is also cultivated for consumption, albeit by a lower proportion of households. After rice, other important crops are cassava and cashew cultivated by 76.3% and 31.3% of households respectively. The average net income of cassava and cashew was estimated to be approximately 1.5 million riel and 1.9 million riel per hectare per year respectively (see **Figure 8**).



**Figure 8.** Proportion of crop types farmers depend upon within the study areas (left) and Rice varieties (right)

## ii. *Livestock*

Livestock has always been a part of Cambodian livelihoods, either for consumption, economically, or culturally. Livestock plays an important part in the livelihoods of respondents in the study area (Figure 9). Cattle are reported to be the most common form of livestock rearing (48.8% of households). Cattle earn respondents approximately 2.9 million riel a year. This is followed by pig rearing (38.8% of households) with total an average net income of approximately 0.9 million riel per year. Cattle and pigs mostly serve as an investment that farmers can cash in to cope with shocks or to cover significant agricultural/household expenses, such as hand tractors or motorbikes. Even though a considerable proportion of households (28.8%) raise poultry, this is usually for consumption rather than a source of income. Interestingly, rearing buffalo (7.5% of households) is relatively uncommon but respondents who report rearing buffalo earn an average of approximately 2.5 million riel per year.



**Figure 9.** Livestock dependence as reported by respondents

## b. *Forest Resource*

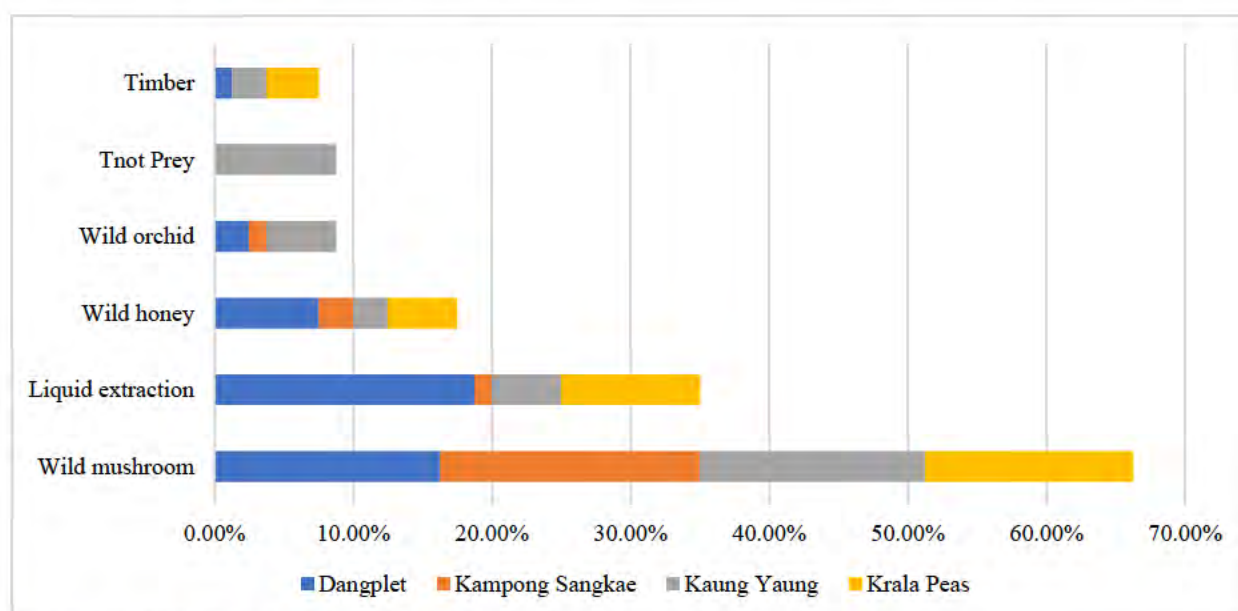
Of the total respondents interviewed, only 7.5 percent of them reportedly depend on forest resource, specifically timber, as a source of livelihood, without any mentioning of charcoal, bushmeat, etc., albeit the latter were mentioned as a source of firewood, protein, etc. Among the four villages, respondents from three villages reportedly depend on timber, excluding Kampong Sangke village (as shown in Figure 9). Despite such small number, the average income generated from the activity of cutting and selling timber is around 2.2 million riels (around 550USD), which is a hefty amount (as shown in Figure 7). However, this comes with a high operation costs as well, especially towards energy, in addition to the risk of being caught by the rangers/patrollers affiliated with the Ministry of Environment, potentially driving cost even higher by paying the penalized fee. This renders many to shy away from carry out the activity.

## c. *Non-Timber Forest Products (NTFPs)*

Over 73% percent of respondents reported depending upon non-timber forest products as a secondary source of income. This is due to the proximity of forest area, where some are available all year round. Figure



10 illustrates the types of NTFPs that people depend upon. Harvesting mushrooms is the most common source of income (66.3% of households) throughout the four villages. Respondents reported its price to be as high as 40,000riel (approximately 10USD) per kilogram, with many varieties that can be harvested throughout the calendar year, earning the villagers approximately 1.4 million riel per year. However, the price may vary greatly depending on availability, so that the supply is abundant, the price is likely to fall to around 25,000riel (approximately 6.26USD) per kilogram only. This is similar in terms of demand as well. There are several mushroom varieties that farmers harvest, namely straw mushroom (ផ្សិតប៉ក់), edible wood mushroom (ផ្សិតឈើ) and peacock mushroom (ផ្សិតក្បោក) Resin trees also remain an important source of income for 35% of households, with the price ranging from 70,000 to 100,000 riel per 30-liter container (approximately 17-25USD), and can earn villagers approximately 2 million riel per year. Even though resin extraction has the potential to earn more than harvesting mushrooms, respondents reported varying yields compared to the more stable mushroom yields. This has led to a proportion of respondents to either depend less on resin or even disregard extraction altogether. Harvesting honey is also a common secondary income source, especially for the villagers of Dangplet and Krala Peas, potential earnings of approximately 0.4 million riel per year. This is reportedly gaining importance as an income source within the two villages due to knowledge dissemination and business model initiated by the NatureWild – a project by World Wild Fund (WWF) and Non-Timber Forest Products-Exchange Programme Cambodia (NTFP-EP) – which has led to higher and more sustainable yields.



**Figure 10.** Non-Timber Forest Products (NTFPs)

#### *d. Off and non-farm activities*

Income from off and non-farm activities provides a potentially important source of income for households able to exploit them (Figure 10). The most common of these activities is selling agricultural labour to other farmers (20.0% of households). This activity is even more pronounced in Kampong Sangkae and Kaung Yaung, earning respondents in average 1.4 million riel per year (350 USD). This is followed by respondents operating their own small business (17.5% of households). However, due to the different types of businesses, there is a large variation in annual income – ranging from 0.7 to 42 million riel per household – even though the average number stands at 23 million riels (5000 USD). Employment is another important



source of income for respondents who receive a monthly salary. Employment opportunities range from teaching to military officers and provide an average of 9.8 million riel a year (2450 USD), making it one of

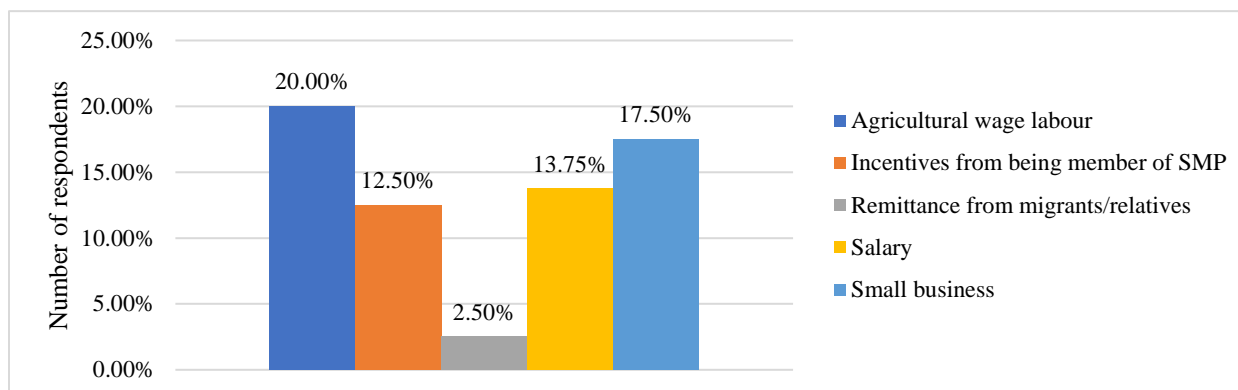


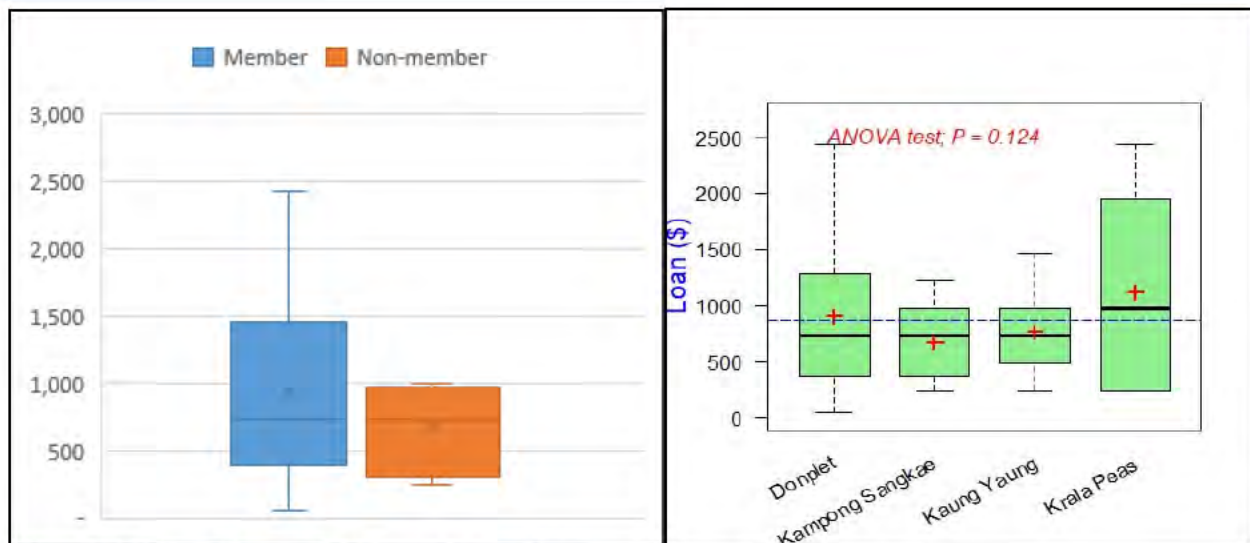
Figure 11. Off and non-farm activities

the most reliable sources of income. Respondents who participate in SMP programmes receive monetary

incentives averaging 0.7 million riel. Finally, remittances are not common source of income in the study area.

### 4.3 Typical individual debt levels

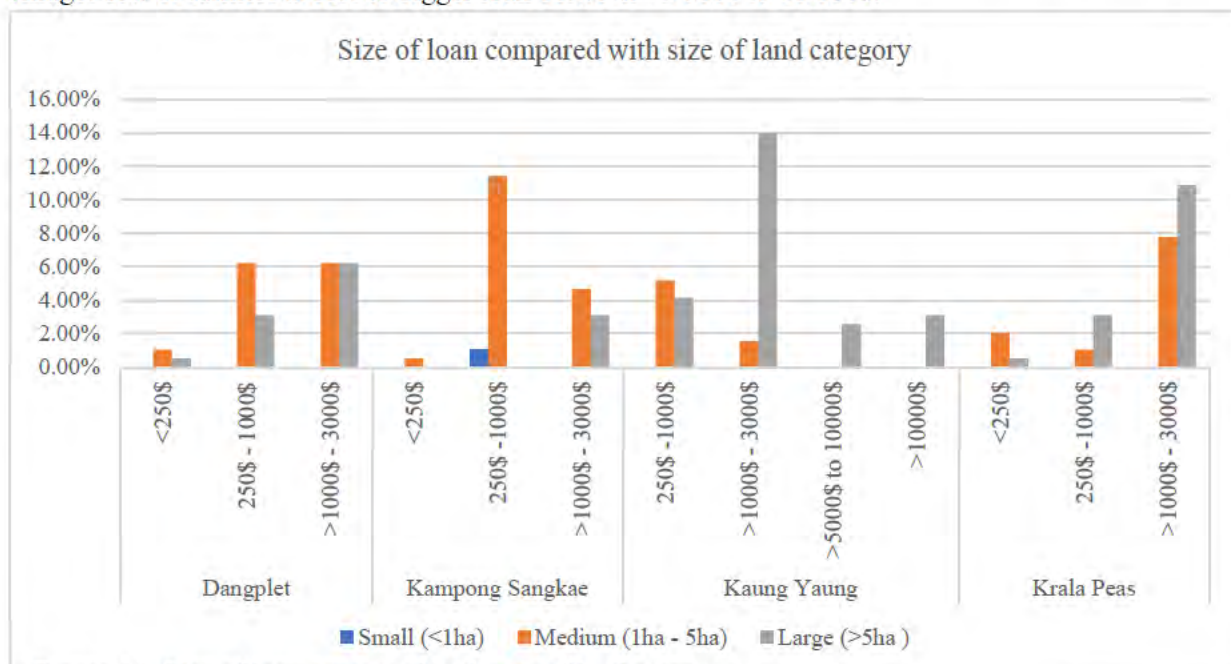
Debt is not an uncommon phenomenon within the study areas. The average level of debt amongst respondents varied across the four villages (see **Figure 12** and **Figure 13**). In Dangplet, the average debt per household was 891 USD (Std. deviation = 716 USD) and was found to range between 49 USD and 2,439 USD. In Kampong Sangkae, the average debt per household was 664 USD (Std. deviation = 297 USD) and ranged between 243 USD and 1,220 USD. In Krala Peas, the average debt per household was 1,142 USD (Std. deviation = 768 USD) and ranged between 244 USD and 2,439 USD. In Kaung Yaung, the average debt per household was 3,061 USD (Std. deviation = 7415 USD) and ranged between 244 USD and 34,146 USD. However, the average of debt in Kaung Yaung village was significantly skewed by a single outlier loan obtained by the respondent to buy a tractor costing approximately 35,000USD. which he bought because of his discontent with a tractor operator during cassava land preparation phase. Overall, the amount of loans reported by respondents were not significantly different ( $P=0.124$ ). In general, 78 of the 80 respondents had outstanding debts of under 3,000 USD. In relation to participation in SMP programmes, the average debt for participant households was 947 USD (Std. deviation = 697 USD) and ranged between 49 USD and 2,439 USD. In contrast, the average debt of non-participants was higher in comparison, at 2,600 USD, and ranged between 244 USD and 34,146 USD. Both the mean and standard deviation of debt for non-participant households was skewed by two significant outliers.



**Figure 12.** Size of loan of SMP member and non-member

**Figure 13.** Size of loan in each village

Figure 14 presents the crosstab between category of size of loan and category of size of land. As the result, it shows that less farmers who have small size of land access to loan, lower than 2% of total proportion access to loan with lower than 1000\$ in Kampong Sangkæ. Most of farmers with medium and large size of land have loan between 1 000\$ to 3 000\$ similarly in the four villages, but differently in Kaung Yaung villages few of farmers access to bigger loan between >5 000\$ to 10 000\$.



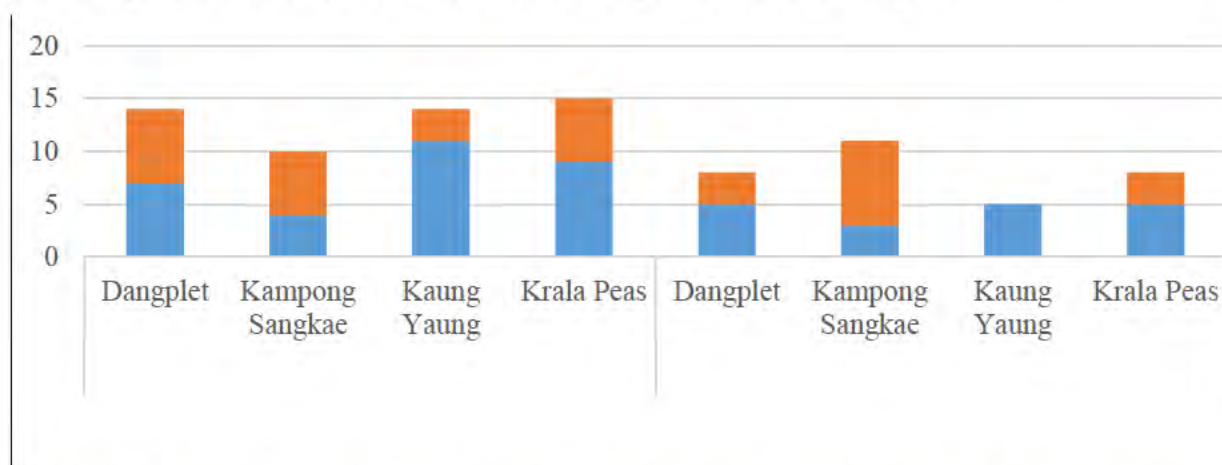
**Figure 14.** Size of loan compared with size of land category



#### 4.4 Purposes of Loan

There are multiple reasons why people apply for loans, which vary from one household to another (*Figure 15*). Respondents reported applying for loans to purchase agricultural machinery, tools or inputs, food, repay previous debt, pay for construction, provide money for newly married couples, expand land, pay for medical treatment, buy motorbikes and meet operational costs from running their own small business. It was reported that most of member used loans for productive purposes (i.e. to support income generating activities), with the remainder used for less productive activities, such as paying for weddings or meeting medical bills.

Based on *Figure 15*, we could see that loans borrowed by the members of SMP and aimed for productive purposes, such as the increment of production, intensifying economic activities, etc., were more common compared to loans towards non-productive purposes. In contrast, loans by the non-members of SMP were directed towards non-productive purposes more, especially in Kampong Sangke village. In addition, the findings of the key informant interviews and focus group discussions suggest that land encroachment is still occurring inside the two protected areas. Some households reporting being unable to participate in SMP programmes because of abuses of the restrictions and guidelines set by SMP. In both Krala Peas and Kaung Yaung, loans were reported as being directed towards land expansion, while no cases of this were reported in either Dangplet and Kaung Yaung. However, loans directed towards agricultural production, either purchasing input or clearing production land, were reported in all four villages.



**Figure 15.** Purposes of loan usage as reported by respondents categorized into member and non-member.

#### 4.5 Success of Using Loan

Based on farmer's perception regarding whether his/her loan(s) is satisfactory or not, which could mean the end result of loan could achieve problem mitigation, increasing production, increasing economic activities, better health conditions/treatments, etc., *Figure 13* shows that narrative. Despite the fact that respondents reportedly took out loans for specific purposes, not all of them actually achieved satisfactory results. Overall, 73.8% of respondents reportedly achieved what they intended with the loan, followed by 21.3% of

respondents who only achieved moderate results and 5% that did not achieve their intended result. There was little difference between participant and non-participant households of SMP programmes, with both groups having a high success rate (see Figure 16).

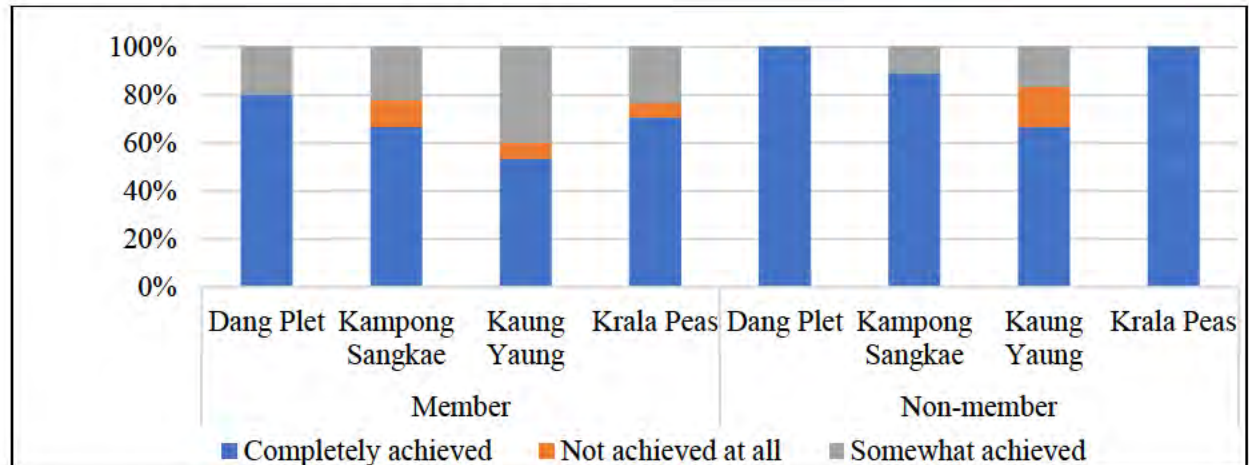
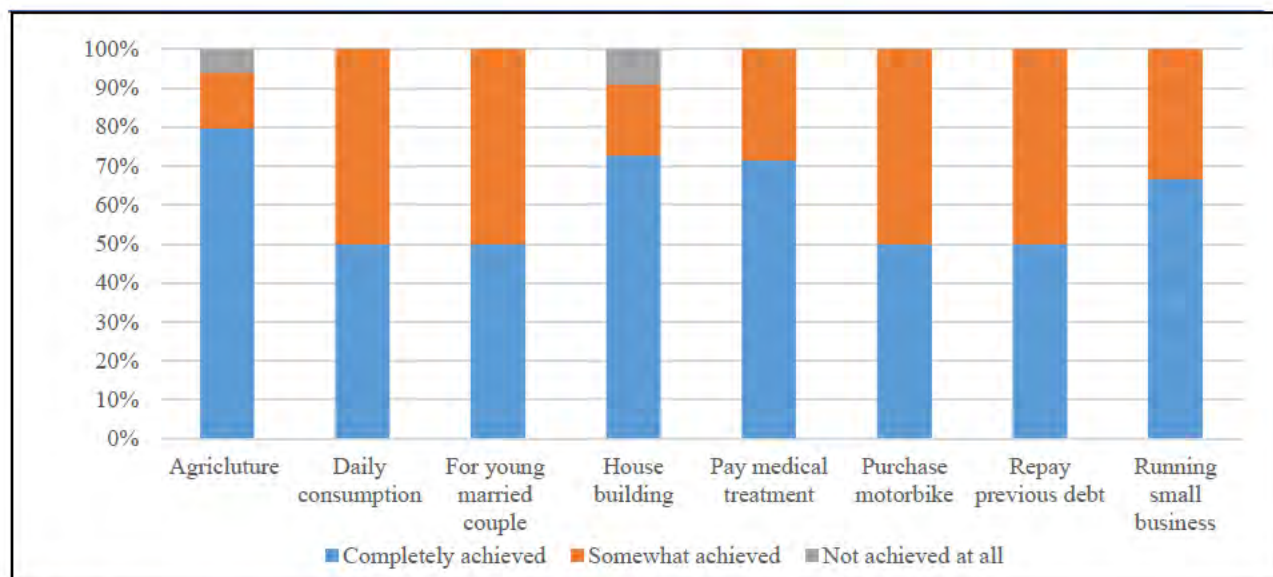


Figure 16. Reported loan success rate

Figure 17 indicated confirmation on achieving of farmers' using loan in each category as detailed and specifically for agriculture. As result, there are 49 of total number of interviewees used their loan for investing in agriculture such as purchasing agricultural inputs, hand-tractors, tractors, and land expansion. More than 80% of farmers who invested in agriculture confirmed completely achieved their investment while more than 10% confirmed somewhat achieved and lower than 10% confirmed not achieved at all. For farmers who did not achieved their purpose especially in agriculture production, have faced some challenges for their production such as irregular rain and price of sold product was low while the price of inputs increased gradually every year.





**Figure 17.** Confirmation on achieving of farmers' using loan in each category

## 4.6 Loan Sources and its Characteristics Observed

### 4.6.1 Sources of loan

Within the study area, multiple lending sources were reported. There were two major sources of loans (see **Figure 18**) formal lending institutions (i.e. MFIs and banks) and social contacts (i.e. friends and relatives). Loans from relatives and neighbours are preferred because they have a flexible or non-existent maturity term. This is followed by loans from MFIs and private lenders, accordingly. Such loans are preferred because the maximum size of the loan is bigger, allowing for more expensive uses of the loan, and because the interest rates imposed are relatively low.

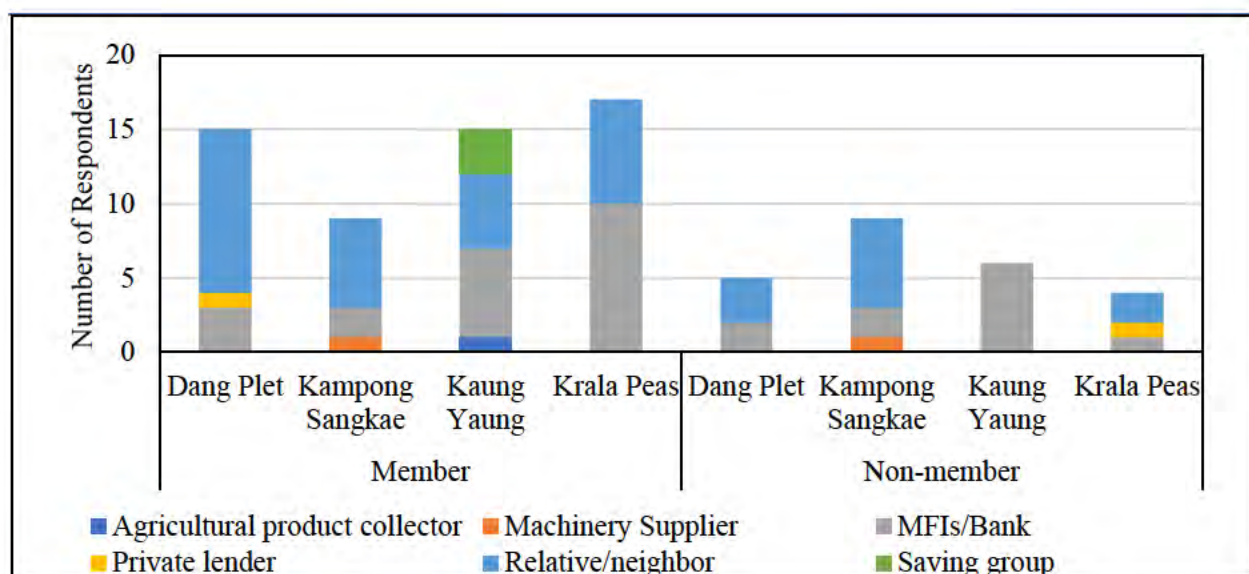


Figure 18. Sources of loan providers

#### 4.6.2 Collateral Used for accessing Loan

In applying for a loan from MFIs, collateral is usually required to secure the loan with land being the most common form of collateral required. However, due to the absence of formal land tenure, most borrowers use a soft title document authorized by the relevant commune administration. The majority of lenders do not require collateral (Figure 19). Loans applied with MFIs, however, are more likely to carry a collateral requirement, albeit the criteria for credit assessment may vary from case to case. One of the reasons why collateral was not common required was due to how people acquire their land, which is primarily by illegally clearing forest land under the jurisdiction of the Ministry of Environment, thus hindering the acquisition of legal tenure over the land. De facto claims to land ownership are typically respected, with owners left to carry out agricultural production to sustain their livelihoods. However, some cases of losing land over dispute were reported. Such uncertain claims to land make obtaining loans more difficult unless soft titles can be secured from local authorities. This situation also impacts credit assessments as land tenure is one of the most factors included in credit assessment, especially for formal lenders. Nevertheless, local authorities often assist lending officers to gather sufficient information about potential borrowers (e.g. land ownership, income and property) to be able to carry out a credit assessment. Informal lenders also assess a potential borrower's ability to repay a loan but emphasize their own relationship and history with the prospective borrower, with trust being the main deciding factor.



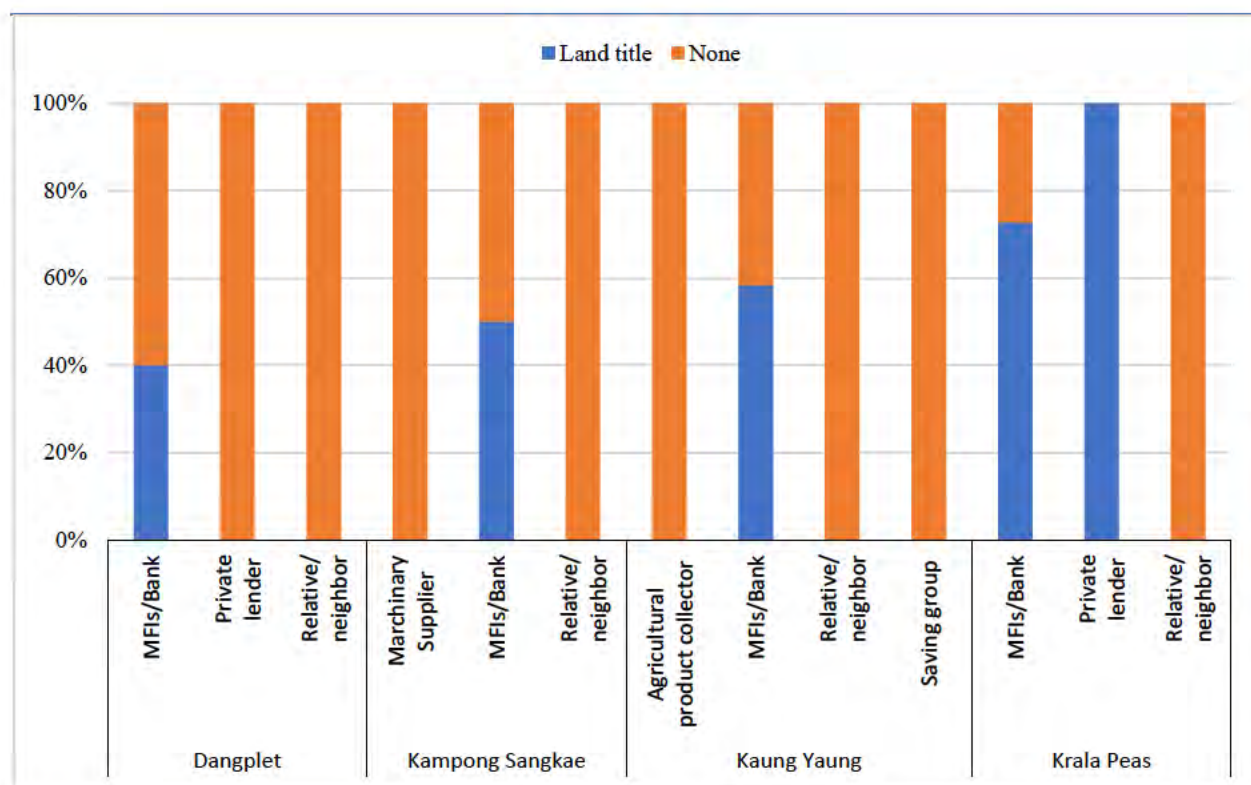


Figure 19. Collateral Used for Loan Access

The 2017 Prakas issued by the National Bank of Cambodia imposed a limit on annual interest at 18 percent. Interest rates imposed by formal lenders (i.e. MFIs or banks) were reported not to exceed 1.50 percent per month. For informal loan providers, however, interest rate varied from as high as 5 percent to nothing. In term of formal lenders, both ACLEDA and MFIs cap their interest rates at 1.5 percent per month, with rates of 1.0 and 1.3 percent also reported (Table 5). There is greater variation for informal lenders. However, the most common scenario for loans provided by social contacts (relatives or neighbours) is for no interest to be charged. The reason for this was reported to be a sentiment of kinship within the community. With trust being the foundation, social contacts aim to help those in need. They also understand the fact that they may also face difficulties in the future, hence. Hence, building good kinship may also help them in them in unforeseen future circumstances.



**Table 5.** Interest rates provided by and the range of loan duration observed from local MFI/Bank.

Sources of Loans	Interest rate (percent per month)	Loan duration (year)
Agricultural product collector	4.00	0.5 - 1
Marchinary Supplier	1.50-5.00	3 - 4
MFIs/Bank	1.00-1.50	1-4
Private lender	3.00-5.00	1-4
Relative/neighbor	0.00-4.00	0-3
Saving group	3.00	0-1

#### 4.7 Average Debt Service Coverage Ratio (DSCR)

Figure 20<sup>4</sup> representing average debt service coverage ratio (DSCR) which indicate their ability to cover their debt service by compared their annual income and current loan. As results, it shows that in average DSCR is relatively closed to each other for the 4 villages which is almost 3. This meant that they have ability 3 times to cover the current debt service. However, some of interviewee's fault to lower than 1 which 19 % in Kaung Yaung, 22% in Kampong Sangkae and Krala Peas and 25% in Dong Plet village. With this proportion for each village. 50% of each proportion representing people who borrow loan from their relative/neighbors without interest requirement. Thus, it is such a social interaction with these practices which meant that they cannot access to other sources such as MFIs or private money lenders. They already aware of their ability to pay back. In contrast, approximately 5% of people who fault to lower than 1 accessed loan from MFIs which practiced as group. With these practices, they are saft from pre-evaluation of MFIs because only one representative was accessed by MFIs staff. For the maximum DSCR is quite Dong Plet compared to the other three villages.

As the calculation based on the actual number of incomes from different sources, so it would be affected on the DSCR which led to lower than 1. Some of farmers who fault to lower than 1 thanks to their crop cultivation especially cassava production failure which somehow spoil by rain and the price very fluctuated, so the net come is extremely low.

Interestingly, there are two farmers who in Kaung Yaung villages accessed to big loan between 10 000USD – 35 000USD from MFIs (Prasac and AMK) as individual to purchase mini-tractor and tractor for their own serve and renting to the others. As result of DSCR is lower than 1 which indicated that they are not able to cover their debt based on the given actual income to this survey. To complement with this, both of them have put their land tittles which MFIs accessed the value of the land and confirmed by village and commune chief, so that loan was approved by MFIs. In addition, these two farmers could not earn better income during these two years which led them faulted into debt burden and sell their land (mostly residential land /some rice field were located close to village) to repay the loan. The evaluation was implemented by MFIs based on different indicators such as DSCR and other collaterals. It seems loan collection is still saft for MFIs as farmers willing to keep paying loan by different ways especially selling out their land.

<sup>4</sup> The outliers in figure were removed.

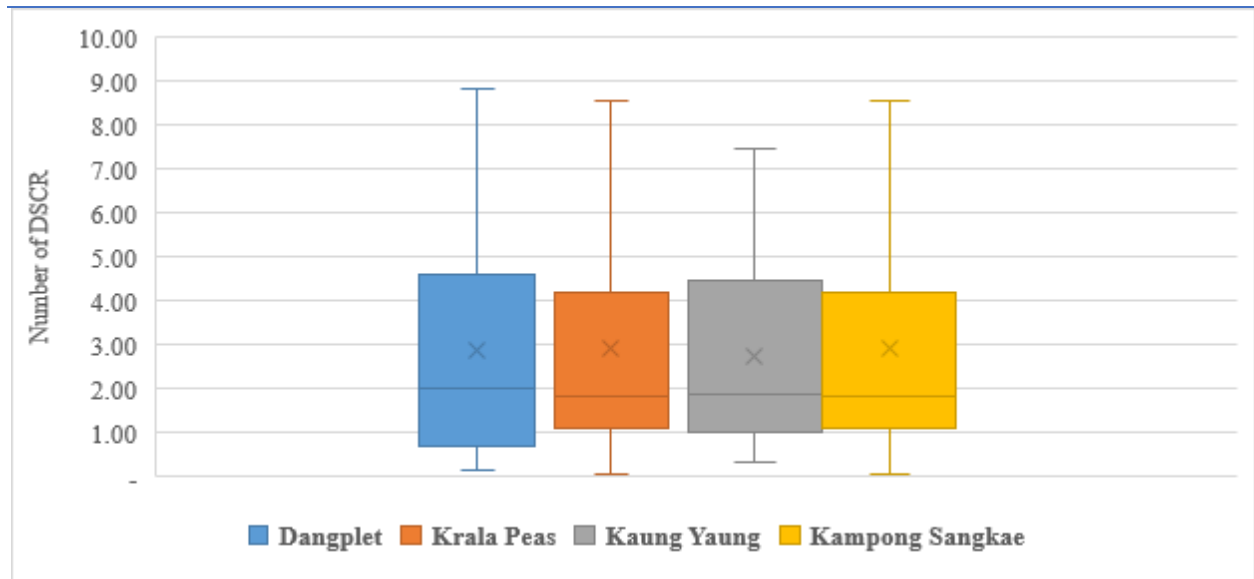
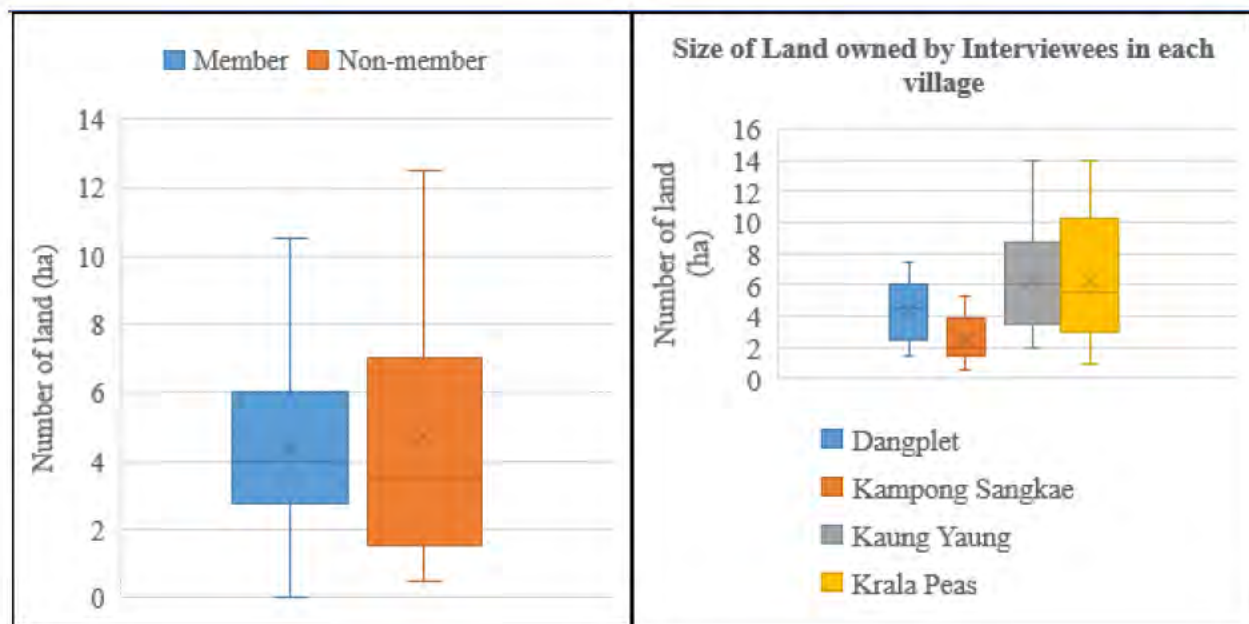


Figure 20. Average Debt Service Coverage Ratio (DSCR)

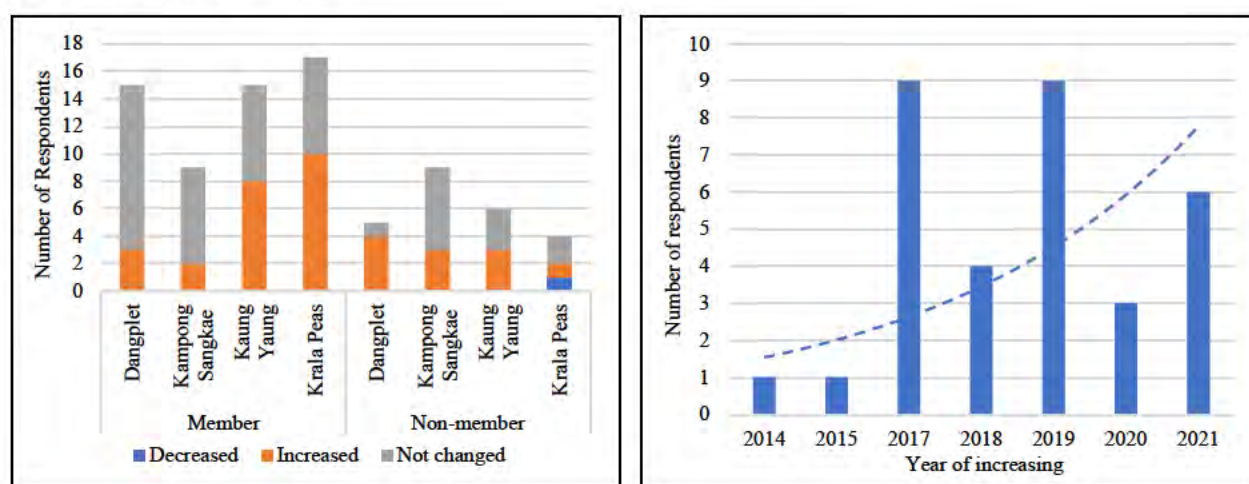
## 4.8 Status of land dynamic and loan access in the landscapes

### 4.8.1 Land dynamics and loan Access

In terms of accessing loans, land is one of the most important factors determining whether someone can obtain a loan or not. Therefore, the size of land owned by prospective borrowers is very important (see Figure 21). In Dangplet, the average land owned was approximately 4.3 ha (Std. deviation = 1.8 ha), and ranged from 1.4 to 7.5 ha. In Kampong Sangkae, the average land owned was 4.9 ha and ranged from 0.5 to 45.0 ha. The average area of land owned was positively skewed by one outlier at 45 hectares; however, most respondents were in reality marginal and small-scale farmers. In Krala Peas, the average size of land owned was 7.3 ha (Std. deviation = 3.2 ha) and ranged from 1.0 to 12.5 ha. In Kaung Yaung, the average size of land owned was 6.4 ha (Std. deviation = 3.2 ha) and ranged from 2 to 14 hectares. No respondent reported not possessing land assets, which guaranteed access to loans.



Most respondents reported the size of their lands increased over time, with very few reporting a decline (see Figure 22). Another significant portion of respondents reported no change to their land size. Reported means of expansion included purchasing from other villagers and encroaching into forest land. Interestingly, respondents reported peaks in land expansion in 2017 and 2019. This was reportedly due to a significant increase in the demand for, and corresponding price of, cassava and cashew. Many respondents expressed their desire to benefit from the current market demand by replacing the traditional rice crop with cassava and cashew instead.



**Figure 22.** Land evolution as reported by respondents (left) and peak year of increasing (right)



#### 4.8.2 Perception on using loan and land encroachment

One of the key hypotheses tested through this study was that household debt plays major role in negatively impacting livelihoods, and eventually driving land encroachment as a form of debt relief. However, the views of respondents in different study villages portrayed a mixed picture. In Dangplet, the proportion of SMP members and non-members who felt that debt is a factor in pushing land encroachment was 30.0%, while those who reported no effect of debt on land encroachment was 35.0%. The situation in Kampong Sangkae was different, with 55.6% of respondents reporting that debt has no significant effect on land encroachment and no respondent reporting a significant effect. According to respondents from the village, this is due to very strict regulation of forest clearing by the Ministry of Environment. The village being situated within the Ministry of Environment also plays a part, unlike other villages which only situated closely to the Ministry jurisdiction/protection.

However, respondents also reported that the practice of taking out loans is not common due to the wide variety of income sources available in the village throughout the year. In Krala Peas, 28.6% of respondents felt that land encroachment is driven by loans. According to respondents, this land encroachment is driven by the need to expand agricultural production – either for consumption or for selling – increasing with household growth. If people lack the necessary capital, they turn to lenders. In Kaung Yaung village, only 19.0% of respondents reported a link between debt and encroachment. In this area, respondents reported that land encroachment is being driven by economic and social land concession, with farmers feeling pushed to encroach due to fear of being left with nothing because of concessions.

Nearly all respondents (88.8%) have a positive outlook towards loans and their benefits (*Figure 24*), while only 1.3% percent expressed a negative outlook. This reflects the ability of loans to enable the purchase of items that people would otherwise be unable to access. etc. Production failure is one of the main factor which lead to negative outlook. As a case of one farmer who grow cassava have accessed to loan approximately 3 000 \$ from AMK and used his land tittle of residential. However, his cassava production was failed due to over rain last year. To repay, this loan he decided to sold out that land.

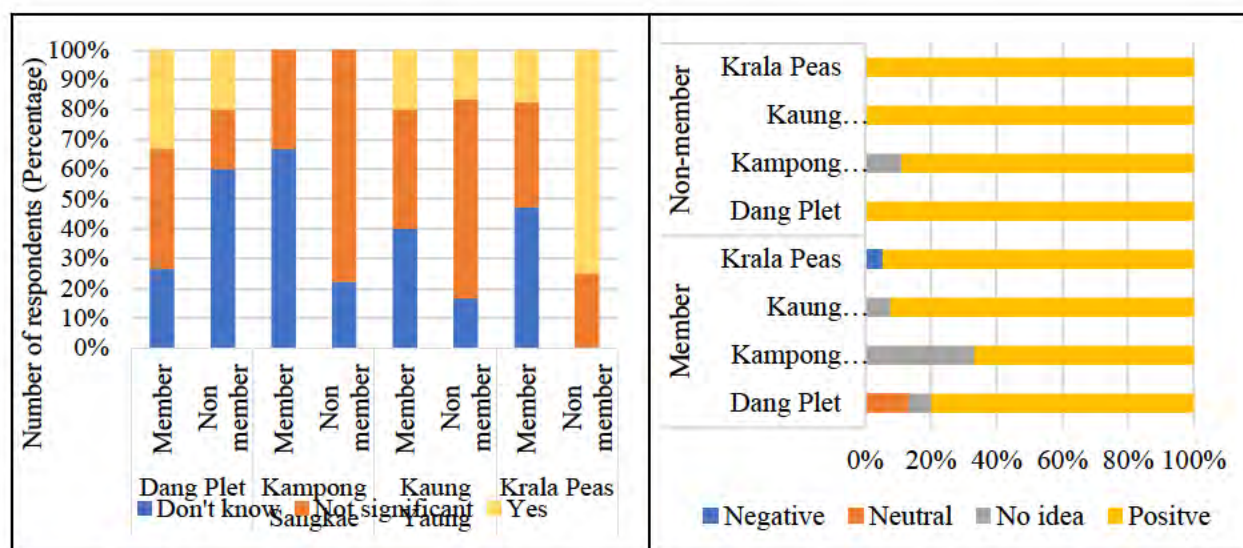


Figure 23. Perception towards debt in general






Figure 24. Perception on loan towards livelihood

### 4.8.3 Perception on factors impact on land encroachment

Table 6 indicates the perception of relevant stakeholders who invited for FGDs and KII to discuss on factors which impacts on land encroachment following the three main indicators such as size of impact, speed and capacity to response. The results come up with 7 factors as listed in the table below. As results, extreme debt is one of the factors but people perceived that it imposed low impacts on land encroachment, low speed of impact and the capacity to response from relevant authority is moderate. The two main factors which mostly indicated are both ELC/SLC and market driven of cassava and cashew production which imposed the big size of impact, land expansion, and gradual speed of expansion while low capacity to responses from relevant authorities/stakeholders.

Table 6. Perception on factors impact on land encroachment

Factors	Size of impact	Speed	Capacity to response
Extreme debt	↓	↓	↔
Agricultural Land Expansion	↑	↔	↔
Logging	↔	↓	↑
ELC and SLC	↑	↔	↓
Road construction	↔	↔	↓
Health	↓	↓	↔
Price of Cassava/Cashew	↑	↑	↔

 = Low  
  = Moderate/Medium  
  = High

## 4.9 Stakeholders analysis

### 4.9.1 Key Stakeholders and Their Operation



**Figure 25.** Identified key actors of loan operation in the targeted areas

In general, there are six main sources of loans used by local people in the study villages. However, the relationship between local borrowers and these lenders differs based on the confidence lenders have of prospective borrowers' income and in investment, type of activities they investing their money in.

#### *1. Relatives*

Relatives play a crucial role in lending money in all of the study villages. This case has been done without collaterals, interest or contracts but based on trust in each other. People report borrowing from relatives when they need money for house construction or coping with emergency expenses in their production, especially health treatment. The size of these loans is mostly lower than 8,000,000 riel (2,000USD) because the loan must come out of the lender's own savings.

#### *2. Private money lenders*

Private money lenders are individuals that provide loans to local people and businesses with high interest rates which can range between 10 to 20 percent per month. These lenders work directly with borrowers without any local authority facilitation. People often borrow from private lenders for meet repayments on other loans and making urgent purchases (e.g. agricultural inputs). This source of credit is particularly accessed by borrowers who are unable to access formal loans because they lack suitable collateral or have



unstable income. For example, if borrowers who mainly rely on seasonal income from agricultural cultivation and NTFPs collection may be more reliant on private lender because they are unable to obtain loans from MFIs. The numbers of borrowers who access this source could be decreased thanks to the presences of formal loan source from MFIs in the village.

### ***3. Saving groups***

Saving groups in the study villages were largely created by NGOs, notably the organisation Racha. After a project's termination, saving groups retain existing committee members and members and continue their activities. However, some fail and have since ceased operating. They work by collecting initial capital from share owners and then providing loan to members and non-members. Share owners then share any capital raised through repayments. With this operation, saving groups are well perceived as an important source of loans and income generation, with women particularly involved in this activity. However, most savings groups are limited in their ability to have significant impacts due to limited capital.

### ***4. Provincial Department of Rural Development (PDoRD)***

This department has some activities regarding financial literacy training. However, it is not yet active in the study villages. Based on the key informant interview, it has provided The Department also help organize savings groups and always follow up with the communities. Moreover, they had provided training on budget management in each household Roveang district which is the biggest district in Preah Vihear because it has 12 communes. People with high position (leader) mostly come from there and many educated people come from there as well. It seems that this department has not reach out the study areas.

### ***5. Machinery input supplies***

Many people make significant purchases, such as hand-tractors and tractors, through leasing credit arrangements. These practices vary in the study villages based on people's capacity, capability and law enforcement in the area. For instance, in Kampong Sangkae, nobody owns tractors, with most people having to rent them from owners in different villages to prepare their land for cassava production. Most people buy hand-tractors from Lao suppliers through credit with a contract and payment schedule. Purchases made through such arrangements attract high interest rates, adding 30% to 40% on top of the total price. Villagers seems satisfied with this model because it offers flexible repayments that suit their seasonal income.

### ***6. Cassava/Cashew collectors***

Loan arrangements between cassava and cashew farmers and collectors are common. Under such arrangements, collectors advance loans at the beginning of the agricultural season to allow farmers to cover initial capital outlays. Both partners agree on the price the collector will pay for the farmer's products. This may be 30 to 40% lower than the market price. It is not a formal agreement. Somehow only collectors who take note in their own document while farmers just keep memorizing. For instance, one respondent reported receiving a loan from a cassava collector and agreeing to sell at a price of 500 riel per kg, while the market price at the time was around 800 riel per kg.

## 7. Local authority/ MFI agency

Based on the interview, FGD and observation, Village chief and commune chief are the key person who could confirm the profile of people in the village and their collateral, land tenure to MFIs/Bank staff whether it is secure or not. They are not involved in any part of the agreement or document between lenders institutions and borrowers. It seems that they do not receive any incentives from those either institutions or borrowers. It could be some in-kinds such as note books, pens, or annual calendar which provided by those lender institutions to local authority. It is also a principle of those institutions. We found that the authorities are working voluntarily, but most of them are satisfied with it. At least, their villages could access to good loan sources as MFIs/Banks which provides loan with lower interest rates compared to the other sources such as private lenders or middlemen. They mentioned that MFIs/banks play key roles as good sources of loan which provides opportunity to his villagers to improve their livelihood. However, it can be improved as long as they use those loan appropriately.

Based on the field survey, the result showed that Vision Fund and AMK have practiced this approach. Agency is selected by voting among group of local people. Being an agency is under the contract with MFI, AMK, and the role is to facility between borrowers and AMK with 3% of the benefit from total interest of total loan provided in the villages. Agency has played very crucial role in connecting with farmers who unable to communicate with staff of MFI, they do not have confident to discuss on loan access.

## 8. Microfinance Institutions (MFIs) and banks

There are five MFIs and 11 banks located in Preah Vihear province. Our team visited three MFIs and four banks to investigate the conditions applied to loans, collateral requirements, interest rates, reasons why people access loans and some services for big amount of using loan. However, only three MFIs operate in the study villages: AMK, ACLEDA, and Prasac. These three institutions have different target customers and provide different sizes of loan.

**Table 6.** Characteristics of lender institutions

Institutions	Size of loan (USD)	Customer's character/purpose	Loan providing condition Collateral requirement	Comments
AMK	500 – 3000	<ul style="list-style-type: none"> <li>- Low income households that rely on seasonal income</li> <li>- People needing money for cassava/cashew production</li> <li>- Purchasing inputs</li> <li>- Daily consumption needs</li> </ul>	<ul style="list-style-type: none"> <li>- Individual and group loans (more popular in the villages)</li> <li>- Representative of the group should be wealthy and have strong credit in the village</li> </ul>	<ul style="list-style-type: none"> <li>- The selected agent plays a key role in confirmation the farmer's condition for the evaluation</li> <li>- Additional approval from village chief and commune chief for collateral</li> </ul>
ACLEDA	1000 – 10000	<ul style="list-style-type: none"> <li>- People who have diverse sources of income</li> <li>- People needing money for agriculture</li> </ul>	<ul style="list-style-type: none"> <li>- Individual loan</li> </ul>	<ul style="list-style-type: none"> <li>- Carefully evaluate all collateral with local authority</li> </ul>

		production or running small businesses - House construction		
Prasac	3000 - 30000	- People who have diverse sources of income - Purchasing mini/large machinery (tractors) - Running small businesses - House construction	- Individual loan	- Carefully evaluate all collateral with local authority

## V. CONCLUSIONS (KEY MESSAGES)

It is evidenced that agriculture still plays an essential role to the Cambodians, particularly to the people within the studied areas. However, a diversified source of incomes proves to be the emerging way of ensuring that villagers will be able to sustain their livelihoods to a satisfied degree in the current free market economy, namely increased opportunity for off-farm activity, employment, small and medium business, etc. We could see that farmers have been trying to transition to this seemingly next phase of economic activities – from depending solely on agriculture, that is – partly through a microfinance scheme, with the reportedly increment of total formal loaners throughout the years. Still, it is also true that unproductive loans directed towards non-income generated activities still present, and it could be in this situation that villagers must depend more on the possibility of diversifying sources of income to make sure that their respective repayment scheme is met, which is not only a matter of a smooth economic flow, but also their social credibility as well. Most of the income generating activities, namely, on-/off-/non-farm activities and livestock rearing, could play a big part in mitigating unexpected economical hindrance; however, the one source of income where villagers need the least investment in order to earn an income is NTFPs collection.

Dealing with debt, beside income sources from crop cultivation, our survey found that NTFPs have played significant role not only ensuring the household's consumption as seasonal, but also one source of seasonal income for dealing with repayment debt. In all villages, majority of interviewees indicated that NTFPs are their asset which they are confident to access to loan from any sources of providers. The debt was repaid or deducted during season of NTFPs collection. Livestock also significantly considered as another asset and income accumulation for local people to deal with their livelihood as well as debt. Cattle and buffalo are the most significant livestock which enable people to access to loan. Without these two income sources, interviewees who have small land and low income from crop cultivation showed clear hesitance in accessing loan from private or official loan provider, MFIs.

Seemingly through the increment of transitioning to a more diversified source of incomes, and hence more demand of much needed capital either for productive or unproductive purposes, we did observe that there is a diverse source of suppliers in the form of microfinance operating in the studied areas. The age-old, informal suppliers in the shape of family relatives as well as private lender still remain in the studied area, and perhaps still play a large part in providing a riskier, yet friendlier loan scheme. However, there are other informal suppliers emerging in the studied area, particularly agricultural product collectors and SHGs. All these informal suppliers mentioned might have either lax repayment scheme, kindest interest rate (as low as zero in term of family relatives), etc., or a crippling one. Either way, the most important element in determining a borrower's credit assessment is whether he/she can be trusted. To put it another way, a borrow will be deemed worthy of a loan based on the social credibility of that person, which may be measured through the person's known source(s) of livelihood (DSCR), habit of borrowing and repayment, or how



well the person is perceived by neighbors, etc. Formal loan suppliers, on the other hand, are a recently emerging suppliers, yet have seen a rapid growth in applicant within the studied areas. Even though AMK seems to be the most active player within the studied area, all formal loan suppliers similarly provide a stricter, yet fairer loan scheme compared to informal ones. Objectively, trust is still the most important factor for formal loan suppliers in determining a person's credit worthiness. However, this takes a more systemic approach to measure the trust factor, which are a direct visit by its credit officer rather than just knowing a borrower's source(s) of income, credit history rather than known habit of borrowing, how well a borrow is perceived by the local administrative figure rather than by neighbors, etc. The most essential measurement is the legal documentation of a borrower's asset, which may be land title documentation, salary confirmation letter, etc.

The size of loan is significantly different between member and non-member of SMP. By comparing between village and village, it indicated that in Krala Peas village interviewees accessed to highest size of loan which was up to 10 000\$ and after that Dongplet, Kaung Yaung and Kampong Sangkae gradually. Interestingly, we found that the value of land (residential land or agricultural land where is located close to the village) quite increased. With this value of land, it would give a credit of farmer to easily access to big loan beside other assessment criteria from loan providers (MFIs). The purposes of loan access are defined as two main purposes such as productive and non-productive loan. Loan access mostly directed to productive purpose such as the increment of agricultural production, crops cultivation, and other economic activities such as purchasing machinery and running small business while remainders applied loan for non-productive purpose such as paying for wedding, building house and meeting medical bills for health treatment. Notably, in both Krala Peas and Kaung Yaung, as being directed towards land expansion, while no cases of this were reported in either Dangplet and Kaung Yaung. However, loans directed towards agricultural production, either purchasing input or clearing existing land, were reported in all four villages. In accessing to loan, MFIs required land title from borrowers who either accessed individually or as group representative.

In general, the loan uses were report as completely achieved by most of respondents while less of them reported not achieved at all. Specifically, 80% of respondents who applied their loan for agriculture, crops cultivation, reported completely achieved, while more than 10% of them were somewhat successful and less than 10% were failed in their investment. The challenges occurred in agriculture imposed by irregular rain and price of sold products while high cost or inputs particularly chemical fertilizers, pesticides and renting services, tractors or labors.

Regarding to the ability to repay for debt, the result indicated that the average of DSCR defined between more than 2 to 3 which shown that majority of respondents were able to cover their existing debt more than 2 to 3 times. However, approximately 5% of respondents who accessed loan from MFIs fault to lower than 1 which indicated that their ability to repay debt was challenging. Indeed, this indication was directed to who accessed loan as group who were not required to assess this DSCR, but the representative of the group was required which all group members were safe from assessment.

Extreme debt was perceived by key informant and local authorities which imposed low impacts on land encroachment, low speed of impact and the capacity to response from relevant authority is moderate. Therefore, instead of our initial assumption going into our research that extreme debt would play a significant role, land encroachment is pushed by multiple factors, wherein extreme debt is of considerable level only. One of the two most significant factors that currently push villagers to encroach land is economic and social land concession, driven the fear of being left out of being able to taking lands for themselves. The other most significant factor besides the aforementioned one is market-driven of cassava and cashew production. These two factors impose an impact over an enormous size of land encroachment, while the



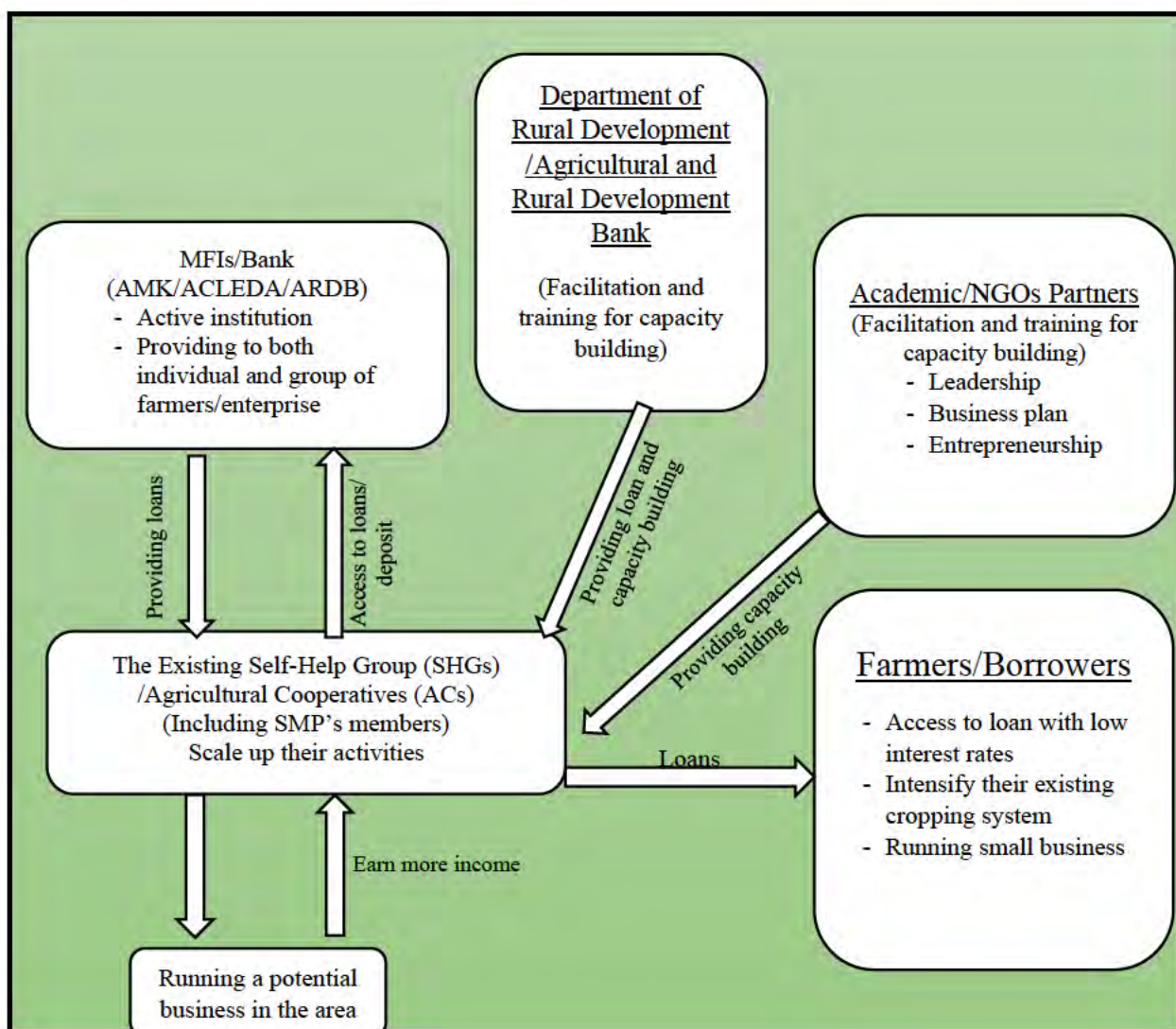
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gradual speed of expansion reported and capacity to responses from relevant authorities/stakeholders were reported as low.

## VI. RECOMMENDED INSTITUTION FOR OPERATING MICROCREDITS

- Many smallholder farmers could not access to loan with low interest;
- Self-help group and Agricultural community are working differently, not synergized but somewhat the same vision and mission,
- There is a potential source of loan from ARDB/MFIs who providing loan to farmer group with lower interest rate compared to other lenders



**Figure 26.** Recommended institution for operating microcredits



Based on the result of the survey, Figure 26 illustrated our preliminary proposed model cooperation of key stakeholders such as the most active MFIs/Bank, SHGs/ACs and supportive institution in provincial level which can be useful to improve the target landscape.

- As the results, we found that there are some existing saving groups (SHG) and Agricultural Cooperative (AC) in the villages of the areas. However, those are not functioned well because of the management of committee. They are working with different villagers/target groups, but they have one common saving and loan providing service. Not many of members or non-members access to loan from that source because of the available loan is limited. Thus, it is one of the existing models between SHG and AC who are working with their members in the villages. It would be recommended as a central actor who connected between other lenders (MFIs/Bank) and supportive institution (provincial department) to their members and other non-members. As recommended strategies, SHG and AC should be paid more attention to improve their gaps in order meet the available resources of supports (loans and capacity building). For example, MFIs (AMK, ARDB and ACLEDA) who are playing significant roles in providing loan to those SHGs/ACs who have their own clear business plan for their operation. If those SHG and ACs meet the requirements, it would be significantly beneficial.
- Within this opportunity, we found that the department of rural development would be a key actor who strongly support in providing training on “leadership, business planning and entrepreneurship” as well as providing the guideline for accessing loans. These trainings are urgently needed for those existing SHGs/ACs. In addition, Youth engagement in the existing structure is the most significant as most of committee members are old people. Youth would be capable to involve in current technology revolutions which allows them to be able to access several opportunities of capacity building and adopting new innovation for their communities and livelihood improvement.
- Thanks to AMK/ACLEDA are the most active MFI who commonly providing small size of loan and with group of farmers. It would be significantly collaboration between SHGs/ACs with this MFI. The strategy is proposing lower rates of loan from AMK to SHGs/ACs as understanding agreement for both sides so that SHG/ACs could earn more incomes for sustaining their operation. In addition, SHG/AC could scale up their own business through this business operation of providing loan to members or non-members. MFIs should provide the guideline of accessing to loan to SHG/ACs in order to comply their requirement.
- More effectively, non-organization and academic sector should be taken into account in order to speed up and fill up the gaps during the progress. For instant, academic sector could discover the insights hidden in the implement through researches or providing additional training to fill the gaps.

## VII. LIMITATIONS

- Time constraints due to location
- Lack of local transport for enumerators
- Difficult to find interviewees especially women thanks to the season of cultivating casava started early for this year, rain came too early
- Language constraint, in Kampong Sangkae village

- The information of Asset of households could not collect because of time constraint, so the debt ratio was not completely elaborated for debt cluster. However, we inserted another formulation of DCSR

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## APPENDIX

### Appendix 1: Transcript for KII with Commune Council in Pring Thum community

Interviewer:

[REDACTED]

Interviewee:

[REDACTED]

Date : 10th March 2022 (13h30mn to 14h52mn)

Location : Krala Peas village, Pring Thom commune, Choam Ksan district, Preah Vihear province.

The interview kicked off by an introduction on the objectives of the research, collaboration between SMP and CE AERD to the commune chief and staff.

#### **I. General characteristics of commune and income generating activities**

The interview was conducted at Pring Thum commune hall with Mr.Chief of the commune who started his work in 2019 and he used to be a commune committee from 1998 to 2019.

#### **Characteristics**

There are two villages within this commune, namely, Krala Peas(378HHs), and Tmat Paeuy(423HHs), with a total number of 801 households. The villagers mostly got married from 16 to 17 years old and there is not the migration in Krala Peas village but in Tmat Paeuy there are 7 migrants (see the figure1).

#### **Income**

##### **Rice**

With the main rice variety being Pkha Malis, farmers could obtain from 0.6 to 2 ton per hectare, cultivate it once a year, and selling it for a hefty price of 1,800riel/kg. However, the yield is mainly for family consumption. The only agrochemical input being used in paddy field is herbicide and at a large amount at that. All of the time, farmers always pay for the herbicide at purchasing without any delayed payment. Sansom Mlup Prey (SMP), as initiated by the Wildlife Conservation Society (WCS), started helping this village from 2018 by purchasing rice from farmers. This is a very beneficial assistance, as farmers are able to barter their rice yield at a hefty price.

##### **Cassava**

Cassava cultivation is peaking strongly and fast this year.

Being the main cash crop of the commune, its cultivation peaked around 2018 due to a hike in selling price. Farmers also cultivate cassava once a year, while selling it at 800riel/kg.

Farmers can only cultivate cassava twice or thrice on the same field. This is because of herbaceous plants dominating the field. Farmers then need to plough their land using a ploughing tractor first in order to resume cassava cultivation. However, the Ministry of Environment has banned importing tractor into the region in fear of using it instead for forest encroachment. And in fact, some farmers did bring the tractor in to transport illegally cut down tree. Nevertheless, if they are caught, the fine is ranging from 2,000,000 to 3,000,000riel/multi-purpose mini tractor. Farmers do know about the retribution, but if they don't illegally sell the trees, their living standards will suffer instead.

#### **Subsistent means of earning**

Other than cultivating rice and cassava, farmers also harvesting mushroom, catching tarantulas, extracting resin, as well as logging. People in the region used to heavily depend on resin extraction, but a private company secretly cut down the resin trees to nothingness. The company intensely began its cutting since 2013.

## **II. Understanding the existing microcredit operational models**

In total, Krala Peas village has 68 indebted households, while the whole commune has 172 indebted households, which would benefit the villagers tremendously if a reduction to interest rate can be done. Nowadays, the total number of households under some sort of microcredit is approximately 70 percent in the entire commune, with a very small percentage under extreme debt. That small percentage is one villager who abandoned his house and moved to Thailand just to escape from his multiple lenders.

The beginning of microcredit in the region was around 2018-19, which correlated to the period in which MFI started to arrive the region. And it peaked around 2021 with the majority of loan aimed for residential renovation, and multi-purpose mini tractor reparation. Nowadays, financial institutions that have debtors in the commune are AMK, Prasac, Mohanokor, Hattha, and ACLEDA, with AMK and ACLEDA the most common institutions being used by farmers. Still, the most popular one is AMK as it seems to have successfully built a rapport with many villagers.

The amount loanable is dependent on credit assessment of the potential debtor. The most frequent amount loaned by the local people ranges from 500 to 10,000 USD. The most common purposes for loan application are for daily expenses, residential renovation, purchasing multi-purpose mini tractor, purchasing motorbike. Residential renovation is most common aim of loan application.

There is one SHG, but not many people join the group, which its number of members doesn't reach 20 people.

In order to successfully obtain the loan, both lender and debtor must request commune counsel for a collateral confirmation. The collateral confirmation procedure is identically applied to loan from all financial institutions. Tong tin and private lender are rarely seen in the village.

## **III. Gaps and challenges of loan providing and repayment in the community**

The opportunity to obtain loan money is a positive sign, as many villagers became more prosperous due to the money. Overall, farmers have great responsibility in loan repayment, the ability to fully repay, and low incidence of vicious debt cycle. Loan repayment is also very stable, without a hitch and lateness. Nevertheless, that is also a cause for concern, as there is uncertainty of vicious debt cycle due to many more villagers are now indebted.

## **IV. Challenges on the effort to forest conservation**

### **Landscape change**

The villagers are very eager to encroach and expand the land, but are met with the Ministry of Environment Park rangers. However, they still resort to secretly, illegally logging.

There is a problem with a private company restricting the use of road that resides with its economic land concession. However, the mitigation effort was fruitful and at the final stage of solution.

### **Illegal logging**

While people used to heavily dependent on resin extraction, a private company secretly cut down the resin trees to nothingness through a mask of economic land concession. The company intensely began its cutting since 2013.

As mentioned, the private company started cutting down resin trees intensely in 2013 despite the presence of the Ministry of Environment here since 1997. To put it simply, the Ministry allowed the company to cut down resin trees unregulated. But when villagers log them, the Ministry restricts, catches, and

penalizes them instead despite most log was used for residential renovation. This has caused a discontent among farmer. Therefore, in a sense of evading penalty, farmers would always try to transport the trees as fast as they could to their houses, as the Ministry won't confiscate logs that are inside farmers' resident.

### **Mitigation effort**

The commune chief is working on an expansion program with H.E. Say Sam Al, the Minister of Environment, so that farmers could obtain more land for crop cultivation. The approximately 30,000 hectare-for-one-village-project will clearly define forest area under jurisdiction of the Ministry while at the same time expand more land – mostly slantwise – for crop cultivation. If succeed, the chief hopes to distribute 5 hectares of land to each household, with the size distributed mainly depended on the total members per household.

During the meeting, H.E. Say Sam Al has backed the land expansion for cultivation in five provinces, namely, Kampong Thom, Siem Reap, Preah Vihear, Oddar Meanchey, and Steung Treng. All communes unanimously express the desire for cultivating land expansion, and are all observing the decision to be made the Royal Government.

## **Appendix 2: Transcript for KII with Labor Seeker in Kampong Sangkae**

### **I. General characteristics of commune and income generating activities**

#### ***Characteristics***

It is not big, for it is only a tad over 70 households. With very few people can speak Khmer.

No villagers migrate to other regions to work. All of the villagers reside and conduct livelihood in the village.

In this village, if we do one thing, we do it altogether the whole village. If we go harvest mushroom, we go the whole village. We do anything altogether. If there is farm labor hiring, we go the whole village still. This is how this village like to do things.

#### ***1.1 Income***

##### **Sticky Rice cultivation**

Beside sticky rice, villagers do not grow non-sticky ones. People here earns a living this way. We start cultivating sticky rice around June, so maybe harvesting would conclude in November.

We cultivate only sticky rice. All paddy fields that you could see by standing here are all cultivated with sticky rice. In Kampong Sralau, however, people do not like to eat sticky rice, but non-sticky rice instead. This village, however, we eat sticky rice in each meal. Even Suong villagers eat the non-sticky ones. Kham Kert as well. The thing is people in this village has a lot of income sources.

In sense, people here has a lot of income sources, and no matter what they do, they can earn a hefty income. It seems like we don't need to adopt and sell harvest to SMP, because we have so many crops that we can sell. If you come here during harvesting mushroom period, you would see no one. Except for the elderly, the whole village would be gone. We would usually go to Baray mountain since 1 o'clock past midnight by our two-wheeled mini tractor. It seems NTFPs have contributed a lots in their livelihood.

As to why we don't cultivate non-sticky rice, some would reason why they don't want to cultivate non-sticky rice that it is difficult to have a proper storing place. I myself store only sticky rice. We would store sticky rice in a silo. We would store it as much as our yield produced. If it is not filled, so be it. If it is filled, and only if it is filled and there is excess that we would sell the excess sticky rice for profit. We will not sell, but keep it for our consumption for the whole year.

They could harvest around 2.5 to 3 tons based on whether the paddy field is recent or old (recent means very nutritious, while old means otherwise). In addition, some apply fertilizers while some don't, so



amount of yield is varied. Fertilizers are only applied on an old paddy field, where rice cultivation has been done for generations, which means soil nutrition level is nearly depleted.

### **Vegetables**

No, there isn't. But there are those who bring vegetables to Laos and sell them there. We cultivate vegetables as well. There are onions, garlic, shallots, etc. We plant them on the land where which is exposed when the river recedes during dry season. People can earn from a lot of different crops. This village does not have any shortage problem with vegetables. We grow them ourselves, which is in contrast with Kampong Sralao village.

### **Farm labor**

We would go to many villages like Nongkoal, Kampong Po, and Dang Plet as well, whether working in rice paddy, or cassava garden.

This village is very well known for diligent. We don't spare our strength. Whether the task be easy or tough, whether we work for the rich or the poor, we will do our utmost best as long as we get paid. Kampong Sralao villagers would say the income is already sufficient why would you go try to earn more? In contrast, Kampong Sangke villagers want more than that. The small money we earn could be used for buying food.

Many of the villagers would not be around the village, because farm owners would hire us to work outside our village. For one day, they would pay us 25,000riel. Those farm owners are mostly from Preah Nongkol village. They would arrive and collect us by bus totaling to around 60 to 70 people. We would spend a few days working together in one field, then move on to the next if there is demand. The reason why such large amount of people working together is due to the vast land of crop each owner has, which is around 30-40 hectares. Farmer in Preah Nongkol village do not have sufficient labor to work their field as everyone has large farm lands. They also provide us meals. I really like the work because it was very enjoyable with so many people together.

### **NTFPs**

There is no resin tree at all in this village. If we want to extract, however, there are resin trees at tail-end of L'pov river, which is where Dang Plet villager extract resin as well. The villagers don't extract it because they don't own any of the trees as well. You cannot go and extract from just any trees you want. There are people who harvesting honey, albeit only a handful of them do. Most of us don't know how to harvest it. It would be too far from here anyway.

Before transplanting sticky rice, we would collect "Pok" mushroom (similar to straw mushroom). After the mushroom no longer grow, we start transplanting sticky rice. After the transplanting, another mushroom starts to grow, which is called "peacock mushroom". After it no longer grow, we collect another type of mushroom which it doesn't have any name. Then, after this, we start to collect wood mushroom. "Pok mushroom" is available around May-June, which is around the start of raining season. Still, it is not always the case, as there are rains already since early year. And it doesn't always grow every year either. Last year, people couldn't find it. This year, maybe it would be available as I saw some people who collect it for own consumption gradually.

With pok mushroom alone, some villager could earn 5-6 million riel in total, which is a huge sum of money.

We collect mushroom far from here, in Dang Plet, Narong, Preah Nongkoal, L'pov river, or far away forest. Some would go to the location by two-wheeled mini tractor, while some, by motorbike, which is faster. We do not sleep at the region, however. We would travel there as early as 02:00AM and return during the evening, which is different from Dang Plet villagers where they would sleep there.

### **Livestock**

At average, people has around 10 cows per households. I myself used to rear around 40 heads. I sold much of it due to nobody was able to take care of it. I was very much regretful when I sold them, but

what can be done when there's no one to look after it? The total of 70-80 households in this village, only around 10 households do not possess cattle.

### **Fish**

Villagers don't fish to earn a living. We only set small traps to catch fish just for our own consumption, without any left for sell. The whole Kampong Sangke villagers set fish, but we would ferment all of it for consumption so that we don't need to buy instead.

## **II. Understanding the existing microcredit operational models**

I think maybe very few. Actually, I have never heard anybody is currently borrowing from any institutions. My sister's resident did borrow from an MFI, but she would repay all of it back in just two weeks. It's like the money was used for dire situations, and it won't be long before the loan is repaid. Even when we bought the two-wheeled mini tractor, if we have the money, we will buy it. If we lack the money, we would not buy it and wait. When those MFIs came and encouraged us to borrow, many of us replied similarly that we are afraid to borrow, because we don't know when we can repay the loan back. This is a situation unique to this village only, not sure about other villages.

For instance, if they need 10 million riels to buy a mini tractor, they would save up to 7-8 million riel and buy a mini tractor with the money. The amount left could be repaid back to the seller in installment.

## **III. Gaps and challenges of loan providing and repayment in the community**

My sister's resident did borrow from an MFI, but she would repay all of it back in just two weeks. It's like the money was used for dire situations, and it won't be long before the loan is repaid. Even when we bought the two-wheeled mini tractor, if we have the money we will buy it. If we lack the money, we would not buy it and wait.

## **IV. Challenges on the effort to forest conservation**

### **Landscape change and dispute**

As to why the village seems small for such an old village, I think it's because there is no encroachment in this village. Even cultivating cassava is a minority either. In this region, if you are trying to encroach forest land, the authority will come and snatch your encroaching equipment. They would have told us the forbidden area belongs to the government. What has been designated for us cannot be expanded further. Even further 4-10 meters isn't allowed. They told us it is within a protected area.

In other villages beside Suong, Kham Kert and Kampong Sangke, they can expand their lands. You did see a cashew orchard on the way here right? There were big trees in the past. They told us not cut trees within that area as well, but when those officers arrived, they totally cleared the land. I didn't see any protection or confiscation at all. That area was huge! It was initially kept in case for our children to expand towards if they do not have any other options. A few years ago, it was leveled totally. Those officers did not care whether the land that they want belonged to anybody or overlapped with villager's land at all. They would just plough the area down without a care. The situation in this village is tough. The poor becomes poorer. Expanding just a bit of land for agricultural activities is prohibited. Expanding for our children is also prohibited. Encroaching is prohibited, so if you have two fields, you HAVE two fields until now. If you have three fields, that number remains for years. Truthfully, it is like we farm on a land that doesn't belong to us. Or even ask to farm on a land that doesn't belong to us. That is a reason why I always said that, during the Khmer Rouge regime, we went by working so hard just for a bowl of porridge, but we were happy. We worked the whole day; we ate only porridge, but we were content. Lunch was already made for us when our work concluded. At two o'clock, we would resume working, and dinner was already made when it was time. Nowadays, if we would like to expand our land for our farming, they wouldn't allow at all. We are not content.

### ***Illegal forest land encroachment***

Many cashew farms belong to a private owner. But truthfully, that area belongs to a person who has “right”. In this village, ordinary villagers do not have the “right” to encroach, but those who have, can do so. Another instance I can give is my own land itself. It lies within the protected area, but I have cleared the area ever since the collapse of the Khmer Rouge regime with only ax and traditional wooden plough. There was no two-wheeled mini tractor at the time. After clearance, if no one clear it continuously, grass and shrub would regrow. After two or three years without any clearing, grass and shrub would grow and cover the land. I couldn’t clear the land every year, as I needed to spend time on something else. The authority then certified my land as forest area, and confiscated all of it. The area was around one hectare. It wasn’t as big because my relatives and I grabbed and divided the land together. We initially cleared the land every year, but after a few years without doing so, all of it are confiscated. I dare state the fact that ordinary people cannot encroach, even an ax or knife would be confiscated on the spot. In contrast, those with “right” could even bring a tractor in, and no one confiscate anything. They are mostly military officers, MoE’s officers, or police officers. Logs cut down by them were not confiscated either. It was sold. However, the toughest region consists of only three villages, namely, Suong, Kham Kert, and Kampong Sangke. They said it is under jurisdiction of MoE. Other than the three, it seems convenient.

### **Appendix 3: Transcript of KII with PDAFF**

Interviewer:

[REDACTED]

Interviewee:

[REDACTED]

Date: 09/03/22 (08:00 am to 09:30 am)

Location: Department of Agriculture at Preah Vihear province

#### **I. Department background**

- Department provided training on organic production and supported NGOs to implement it
- Advertised the agricultural practice through the radio
- Created social media page to extend the agricultural technique
- Conducted survey on loan in each household last few years
- During COVID pandemic, they also tried to find a way to provide sharing and training to farmers, they communicated by Telegram and meet through online Tools it through

#### **II. Current issues on land use in the area**

- The special feature of the people living in Preah Vihear is that there are not many people migrating outside the province
- In average, farmers owned land around 5 ha/household
- Not many farmers who expanded their agricultural land due to lack of labor in agriculture practices and restriction of Community of Forest, local NGO (SMP), and Department of Environment’s restriction

#### **III. Information of using loan**

- In Preah Vihear province, people are commonly using loan. However, many of them are borrowing from each other inside the village (relatives/ neighbors). But still have some people are using loan from MFIs, and private money lender.



- The MFIs and Bank which are famous for providing loan in the area including ACLEDA, ABA, Hathakasekor, Mohanokor.
- The main reasons of using loan such as
  - o Invest in agriculture (almost 90%) but they just took some amount of loan for agriculture (the remaining they used it for other purposes, and they will pay back all loan after they harvest their cashew nut)
  - o Hired labor for agriculture
  - o Buy agricultural input
  - o Exchange plot of land to near house
  - o Expand agricultural land by using machinery and labor but not buying
  - o Buy motorbike for their children (change new series almost every year) => mostly indigenous people (Kouy) who bought it
  - o Build new house
- There are 43 Agricultural communities and have saving group in each community except 2 communities
- Agricultural communities can use loan from ARDB bank easily because they have a clear workplan and enough documents to process the loan. For instance, there is a farm that raised pig got loan from ARDB bank because they got a clear plan of investment from CP company

#### IV. Challenges of using loan

- Farmers get high risk to lose their land because they only depend on agriculture if there is any natural disaster. And there are few people who already faced this challenge
- Participate mentioned that they got low yield because of organic practicing
- Agricultural communities provide loan with high interest rate but not many documents are required but they faced several conflicts with the saving members because they do not have enough money to provide loan for everyone since the user are not returning on time (They provided a solution to create a community to export vegetable and it provide more benefit to people (have enough money to provide loan and did not require anything to mortgage)

#### V. Partnership and supporting activities to local people

- Among 5 farmers, only 1 farmer who got certificate from the GAP project of certifying their organic vegetable. There are 1000 farmers who got certified by IVY. In addition, Hack, Amlu Rice supported to certify on rice and cassava. Golden rice, South Asia, CACE supported to certify on rice, cassava, and peanut.
- Eco-third, Amlu Rice had supported Farmer association to export organic rice 50 tons to abroad
- Suggestion from the Department to using loan in the right purpose:
  - o Invest in agricultural technique
  - o Loan for agriculture investment and running business
  - o Borrow from ARDB which provided low interest rate of loan and have technical staff to support (However, there are some challenges for farmers to use loan from ARDB because it required a clear plan of investment, economic analysis, and many requirements of using loan





#### Appendix 4: Transcript of KII with PD of Commerce

Interviewer:

Interviewee:

Date: 09/03/22 (10:00 am to 11:30 am)

Location: Department of Commerce at Preah Vihear province

##### **I. Department background**

- Department of Commercial play main role to connect between sellers and private companies. Moreover, the Department help to facilitate and solve the problems of selling and buying. They also provide wells, and constructed building for vegetable storage (cost around 20000 USD) at 8 districts in Preah Vihear province. Additionally, they supported many activities in Roveang, Kulen, Chom Khsan, and Tbeng Meanchey district. In addition, the Department also supported sellers/farmers who lacked financial capital by connecting them to loan providers. For instance, ARDB provided low interest rate of loan (7%/year). ARDB provide loan from 5000 to 200,000 USD. AMK is using loan from ARDB and provide loan continue to local people. Department also supported farmers to prepare for their business plan for using loan.
- AIMS project have implemented in 18 provinces include Preah Vihear province as well. Currently, the project and department provided 20 stands for farmers to sell their productions and 14 stands have been using. Additionally, they also provided tables, and tablecloths. The seller in each stand is succeed in their selling because their productions are always out of stock. There are 5 typical products which have been selling including chicken, vegetable, rice, and cassava and silk (just plan but not sell in the stand yet). However, they have to do the selling contract with the project. AIMS's staff always follow up with sellers for data collection of their production and selling information. AIMS project provided training and solution on crop plantation and livestock raising.

##### **II. General information of using loan**

- There are 39% of local people who easily can access the loan particular AC's member. Mostly, they are in the Aspire project because they borrowed as group, and they already have clear workplan for their investment.
- Main reasons of using loan including:
  - Invest in agriculture (buy agricultural machinery, agricultural input, hire labor in agriculture...)
  - Build new house
  - Prepare wedding for their children
  - Run their own business
  - Health treatment

- Farmers always return to their loan after they harvest their crop. They mainly rely on their agriculture.

### III. Challenges of using loan

- Even though ARDB provide low interest rate of loan to farmers but there are several challenges that farmers could not access it:
  - Lack of capacity to fulfill the required workplan of business
  - Take around half month to get the loan
  - Required land title (because local people did not have land title and the process of register land title is complex and take many steps, and many hectares of land are located inside protected area. But they can use temporary land title (ត្រួតពិនិត្យ))
  - Only people who are member of AIMs can access the loan from ARDB
- Farmers never faced any constrain on repay for the loan because they already though well for their income and ability for paying. Only some government staff and businessman who faced it.
- People who lived in Chaom Khsan district are migrating a lot using loan a lot because it might be because of using loan in their household.

✚ Mr. Bola staff of ARDB: 097 33 19 488, ARDB located behind Canadian bank.





## Appendix 5: Transcript of KII with PD of Rural Development

Interviewer:

[REDACTED]

Interviewee:

[REDACTED]

Date: 09/03/22 (02:00 pm to 03:00 pm)

Location: Department of Rural Development at Preah Vihear province

### I. Department background

- There are 10 offices and 21 government staff in the Department of Rural Development (2 contract staff). There are 3 main offices which work actively including Rural Water Supply Office, Rural Health Support Office, and Rural Economic Development Office.
- Partnership with UNCES, ADB, Cash for work, Sambat, and World Vision
- In Preah Vihear province, there is potential for agriculture due to availability of land
- The Department help organize savings groups and always follow up with the communities. Moreover, they had provided training on budget management in each household
- Roveang district are biggest district in Preah Vihear because it has 12 communes. People with high position (leader) mostly come from there and many educated people come from there as well.

### II. Information of using loan

- Almost 70 to 80 % of local people are using loan
- Main reasons of using loan:
  - Invest in agriculture: plant cassava, cashew nut (mostly in Roveang district)
  - Buy agricultural land (5 – 10 hectares)
  - Expense in converting forest area to agricultural land for cashew nut plantation
  - Buy agricultural inputs
- In the context of COVID pandemic, only agriculture can importantly support their livelihood (for instance: there is a private company named Try Pheap Suntana which buying cashew nut from farmers for processing product). And there is middleman who buy raw cassava from farmers (Buy dry and fresh cassava and the middleman sold it to Vietnam)

### III. Changes of land use and challenges of using loan

- In the last 3 years, land use is dramatically change in the area because of the condition of COVID pandemic, people cannot go anywhere beside of working in agriculture. Mostly, they plant cassava and cashew nut.
- **She addressed debt is a main reason for local people to encroach land.**
- Local people depend on the income of selling agricultural products and sell land
- There are only 2 communes in Roveang district (Romtom and Robeab commune already registered for land title. People in Songkom Tmey district did not have land title yet. They could only be certified from commune level for using loan from MFIs or bank.
- Some people have used loan for buying agricultural land, but they got failed (low yield of crop production) so they faced in difficulty to pay back for their loan. There are few people who used loan from private money lender, and they have lost their land because of it (buy land and failure in agriculture)

- MFIs are common using in the area but in case some people do not have money to pay for the loan on time, so they had borrowed from private money lender to pay to MFIs





## Appendix 6: Minutes for Land Scape Reading Dongplet village

Field observers: [REDACTED]

 Date : 07<sup>th</sup> – 11<sup>th</sup> March 2021

✦ Location : Dongplet village, Cheab 2 commune, Cheab district, Preah Vihear province

Geography	Upland area (elevation 17m)
Crop types	Rice (Romdul) main crop, cassava, cashew nut, palm tree (tnout)
Livestock	Cattle, pig, poultry
Off-farm and non-farm	NTFPs collection (honey, resin, forest, mushroom, wild fruits...), no in and out migration
Infrastructure	Trail (some difficulty during raining season), only primary school in commune and secondary school in the district, pagoda, people live together in the traditional way
Potential	Chheab wildlife sanctuary, Sansam Mlup Prey organization support on market price of rice production, and wildlife conservation
Challenges	Insufficient of water, conflict on land use, population growth, low income to support family, and insufficient of agricultural land to share for new generation, natural resources declined, and forest clearance
People's behavior of using loan	<p>Not many people prefer to use loan from bank or MFI. They mentioned because they do not have much knowledge on using and some people do not have ability to return for dept. Mostly, they borrowed from their neighbor, family, or friend with no interest, and they can return after they cultivated their rice production or NTFPs collection.</p> <p>Reasons of using loan: buy agricultural equipment (hand tractor) and agricultural practices, and health treatment</p>









## Appendix 7: Minutes for Land Scape Reading Krala Peas village

Location: Krola Peas village, Pring Thom commune, Chom Khsan district

Geography	Upland area (elevation 17m)
Crop types	Rice (Romdul, Neang Om) and cassava are main crops, cashew nut, vegetable (cucumber, was gourd)
Livestock	Cattle, pig, poultry
Off-farm and non-farm	NTFPs collection (honey, resin, forest, mushroom, wild fruits...), migration
Infrastructure	Trail (some difficulty during raining season), only primary school in commune and secondary school in the district, hospital, pagoda, many big house, and Economic land concession (which lost of many hectares of forest)
Potential	Kulen Promtep wildlife sanctuary, Sansam Mlup Prey organization support on market price of rice production, and wildlife conservation Even though, many people are dismissed from team members of SMP but they still have more people who involved in SMP rather than Dongplet village
Challenges	Flood in some months which could affect to their crops, conflict on land use, population growth, low income to support family, and insufficient of agricultural land to share for new generation, natural resources declined, and forest clearance
People's behavior of using loan	People are commonly use lone in this village. They used it from MFIs, bank, and their relative or neighbor. People can earn more income from rice production, and NTFPs collection particularly resin, honey, and forest. Reasons of using loan: buy agricultural equipment (hand tractor, tractor), forest clearance (they mentioned that it is their old land and not do it long time so have to clear it), agricultural practices, health treatment, buy vehicle, build house, and spend for wedding and party









**Appendix 8 : List of MFIs and Bank operating in Preah Vihear province**

N°	MFIs	N°	Banks
1	Funan MICROFINANCE PLC	1	ABA bank
2	Amret Microfinance Institution	2	ACLEDA bank
3	PRASAC	3	Vattanac Bank
4	LOLC (Cambodia) Plc.	4	Canadia Bank PLC.

5	MOHANOKOR MFI	5	PRINCE BANK PLC.
		6	SATHAPANA BANK
		7	SBI LY Hour Bank PLC
		8	ARDB Bank
		9	CPBank
		10	HATTHA KAKSEKAR LIMITED
		11	Woori Financial Group, Korea (former Vision Fund)



## Appendix 9: Questionnaire for household survey

### Questionnaire for Household Survey

#### ❖ Introduction of interview

My name is.....a researcher from the Royal University of Agriculture in Phnom Penh. I would like to inform you that the Royal University of Agricultural is conducting the research on “**The Behaviour of Household and Personal Microcredit Usages**” under the collaboration with Sansom Mlup Prey organisation. The outcome of this research aims to establish the pathway for developing and improving the management of biodiversity in Chaeb Wildlife Sanctuary and Kulen Promtep Wildlife Sanctuary in Preah Vihear province. Therefore, I kindly ask you to participate in my questionnaire survey on the understanding of behaviour of using loans in the study areas. We won’t give you any direct benefit if you participate. We are sure that your answers will be kept anonymous.

Would you like to participate in this survey? ☐YES or ☐NO (If yes, continue the interview. If not, politely thanks and find another sample)

Thank you very much.

#### ❖ Objectives of survey

- Understanding the household’s livelihood of local people;
- Analysis the status of debt, typical individual debt levels (as well as extremes), purpose of loans, quality of credit assessments and default rates with documented anecdotal examples, reason of falling into debt and strategy to deal with debt;
- Profiling stakeholders / providers most prevalent in the landscape and describing their operating models;
- Assessment on typical debt burden of communities in KPWS and Chaeb through available data and potential impact on livelihood decisions based on interviews.

#### ❖ Venue of the survey

Date: ...../...../.....			Questionnaire Code
Village:..... .....	Commune:..... .....	District..... .....	.....

#### Session I: Profile of interviewee:

<b>1.1</b> Sex:..... a) Male b) Female	<b>1.2</b> Age: ..... .....	<b>1.3</b> Status in family:..... a) Head of HH b) Husband/Wife	<b>1.4</b> Education ..... .....	<b>1.5</b> Main Occupation: ..... .....
<b>1.6</b> When did you settle here? .....				
<b>1.7</b> Why?.....				
<b>1.8</b> Why did you take loans?			..... .....	
<b>1.9</b> So far, have you ever fallen into debt burdens?				
<b>1.10</b> Need money to repay loans/debt, did you pay them all?			Yes    0. No	

<b>1.11</b>	Are you a member of Sansom Mlup Prey?	1. Yes    0. No
<b>1.12</b>	If yes, why did you decide to join SMP?	.....
<b>1.13</b>	If yes, which group you are?	1. Ibis I 2. Ibis II 3. Organic 4. Wildlife friendly (WF)
<b>1.14</b>	Rice variety	1. Romdoul 2. Phkar Malis 3. Neang Om 4. Others.....
<b>1.15</b>	If not, why?	.....

**Session II: Characteristics of the household:**
**❖ Profile of household's members**

<b>2.1</b> Can you tell us about your dependent family members?						
Active HH Member	Gender	Age	Marital Status	Education	Occupation	Comments

<b>2.2</b> How much land (hectares) do you have?						
Plot Number	Type of plot (Chamkar/forest)	Area (ha)	Crop cultivated	Since when did you cultivate?	Tenure (owned or rented/sold/parent)	If there is type of land title and since when
<b>2.3</b> Has your land increased or decreased in the past 5 years?					1. Increased 2. Not Changed (If not changed, skip to Session III) 3. Decreased	
If 1 /3, how many hectares? .....						
<b>2.4</b> If 1/3, when was it? .....						

<b>2.5</b> If 1/3, what were the main reasons? .....	
<b>2.6</b> How did you expand your land? .....	
<b>2.7</b> Did you borrow money for land expansion?	1. Yes    0. No
<b>2.8</b> If yes, how much was it?	.....USD
<b>2.9</b> If yes, from whom?    1. Relative    2. MFI    3. Private Money Lender    4. SHGs    5. Other .....	
<b>2.10</b> Did you spend all of that loan?	1. Yes    0. No
<b>2.11</b> Is it easy or difficult for you to expand your land further? Whether yes or no, please describe your capacity and capability? .....	

### Session III: Domestic and assets:

#### 3.1 Agricultural activities and income

Source of income	Area (Ha)	Production (Ton)	Price (Riel)/unit	Income (Riel)	Expenses (Riel) Fertiliser, pesticide, pumping, petrol, rental fee,	Net income (Riel)/year	Importance*
Cashew Plot.....							
Cassava Plot.....							
Rice Plot.....							
Others.....							

Type of NTFP	Yield	Price per unit	Harvest per annum	Total Income (riel)	Total Expense (riel)
Wood Collecting					
Resin Extraction					
Harvesting Mushroom					



Harvesting Honey					
Wild Orchid					
Bay Domnerb					
Catching Tarantulas					
Hunting Wildlife					

### Rearing Livestocks and Fish

Types of Animal	Number of heads	Duration of selling	Number of sold heads/kg	Price per unit	Total Expense	Total Income
Cattle						
Buffalo						
Poultry						
Pig						
Fish						

### 3.2 Non-farm, off-farm activities and incomes

N <sup>o</sup>	Activities	Labour input (day)	Price/day/month h	Income/ month/ year
1.	Small business			
2.	Salary			
3.	Pension fund			
4.	Agricultural wage labour			
5.	Garment worker			
6.	Remittance from migrants / relatives			
7.	Incentives from being member of SMP			
8.	Other (please specify) .....			

<b>3.3</b>	How much can you save from your revenue each month or year?	Amount (Riel): .....?
<b>3.4</b>	What do you do with your savings from your revenue? 1.For agricultural work, buy agricultural tools/inputs      2. Investment 3.to feed the family (buy more food)      4.to pay for the medical treatment      5.pay for children go to school 6 married/festival      7 for migration      8.to repay previous debt	

	9. House building 10. To cope with crop failure 11. For young married couple starting business 12. For help child to start agricultural work 13. Other pls specify.....	
<b>3.5</b>	How do you save it? 1. SHG 2. Bank 3. MFI 4. Tong Tin 5. Individually 6. Others.....	
<b>3.6</b>	How much interest rates do you receive per month? .....Amount (Riel/month)	

<b>3.7 What is the main element of daily expenses in your family?</b>		
Item of expenses	Amount (Riel)/season	Amount (Riel)/year
1. Daily consumption		
2. Education		
3. Wedding		
4. Ceremony		
5. Migration		
6. Health treatment		
7. Entertaining		
8. Social contribution		
9. Others.....		

#### Session IV. Microcredit access and strategy to deal with debt

<b>4.1</b>	So far, have you ever taken on any loans?	Yes    No
<b>4.2</b>	What are the drivers that encourage you to access loans? <div style="display: flex; justify-content: space-between;"> <div>           External            Availability of local lenders            Social trends            Land expansion            Other: .....         </div> <div>           Internal            Follow other people            Mitigate dire situation            Other: .....         </div> </div>	
<b>4.3</b>	Can you tell us how you tried to repay the loan? .....	
<b>4.4</b>	Did you pay all those loans?	Yes    No
<b>4.5</b>	Are you currently borrowing any money from someone?	Yes    No
<b>4.6</b>	If yes, how many loans do you have? 1. One 2. Two 3. Three 4. Four 5. More than 4	
<b>4.7</b>	If yes, who do you currently borrow?	
	Sources of loan providers	Amount of loan / Purpose of loan
	1. Family/relatives	Interest rates/month
	2. Your neighbour	Duration (From when to when)
	3. Tontin	Collateral required
	4. NGOs	
	5. Trader/Employer/ Agricultural firm	
	6. MFI/Bank	
	7. Saving group	

	8. Rice bank/ Village bank				
	9.Others.....				
4.8	If not, why? 1. Do not need    2. Cannot afford    3. Too complicated to borrow    4.To high interest    5.Other pls explain.....				
4.9	If land title, how did you get it and from whom? .....				
4.10	For what purpose do you borrow? 1.For agricultural work, buy agricultural tools/inputs    2. Investment    3.to feed the family (buy more food) 4.to pay for the medical treatment    5.pay for children go to school    6. married/festival    7 for migration 8.to repay previous debt    9. House building    10.To cope with crop failure    11.For young married couple starting business    12.For help child to start agricultural work    13.Other please specify.....				
4.11	If a formal loan, how do you access it? 1. By individual    2. By group				
4.12	If by group, how many people compose the group?				
4.13	Who created the group (group members or agents)?				
4.14	What are the rules of the group?.....				
4.15	Which one do you prefer? 1. By individual 2. By group				
4.16	What do you do with the remittance earned by your family member who migrate(s)? 1.For agricultural work, buy agricultural tools/inputs    2. Investment    3.to feed the family (buy more food) 4.to pay for the medical treatment    5.pay for children go to school    6. married/festival    7 for migration 8.to repay previous debt    9. House building    10. To cope with crop failure    11. For young married couple starting business    12. For help child to start agricultural work    13. Others. Please specify.....				
4.17	Do you think loans are easy to access for you? 1. Yes    0. No				
4.18	Did you achieve the result you hope to achieve with this money? 1. Not achieved at all    2. Somewhat achieved    3. Completely achieved				
4.19	Did your plans change? 1. Yes    0. No				
4.20	Could you pay the interest rates on time?				
4.21	Which income sources do you use to pay the interest rates?.....				
4.22	Have you ever been late to pay for a loan? 1. Yes. If yes, reasons: ..... 2. No.				
4.23	How do you deal with payment for that loan? .....				
4.24	Did you sell your plot of land? .....				
4.25	Was it lower than market price or higher? .....				
4.26	If lower price, why? .....				
4.27	Whom did you sell your land out? 1. Private lender    2. Relatives    3. Input sellers    4. Broker    5. Others.....				
4.28	What did you do or plan to do next? .....				
4.29	In general, to what extent are you satisfied with loan providers/MFI in your area? 1. Not satisfied 2. Somewhat not satisfied 3. Neutral 4. Satisfied    5. Very satisfied				
4.30	What is the most pressure for you to deal with loan providers?				
4.31	How did they behave to you? .....				
4.32	<b>To what extent are you satisfied with each of the microcredit providers?</b>				



	Service provider	Level of satisfaction	Explanations
1	Private money lenders		
2	Input sellers		
3	SHG		
4	MFI		
5	Relatives		
6	Others.....		
4.33	What are your suggestions to those microcredit providers?.....		
4.34	What is your perception of a debtor? Positive or negative impact? ..... .....		
4.35	What is your perception on applying for a microcredit? ..... .....		
4.36	Do you think that the microcredit available locally is a driving factor towards land expansion? ..... .....		
4.37	Do you think that whether being indebted is a factor pushing you towards land expansion or not? ..... .....		
4.38	Which lender(s) do you find strongly satisfied?.....		
4.39	Have you ever changed from one lender to the other? Yes      No Why? .....		

**1-5, 1 indicates least and 5 indicates most**

	4.40 Do you have the following material and machinery in your house?	If YES, how many?	Main purpose (only for main machinery)	Sold for loan repayment purpose
1	Table			
2	Chair			
3	Bed			
4	Mosquito net			
5	Battery			
6	Lamp			
7	Torch			
8	Mobile phone			
9	Fan			
10	Radio			
11	Television			
12	Satellite receiver			

13	DVD or VCD Player			
14	Karaoke system			
15	Paraffin lamp/ Candle			
16	Electricity generator			
17	Bicycle			
18	Motorcycle			
19	Romorgue			
20	Pulling cart			
21	Horse/ cow cart			
22	Car (tourist)			
23	Car (transport)			
24	Truck			
25	Small scale rice mill			
26	Hand-tractor			
27	Tractor			
28	Other (please specify).....			

**Thank you!**

## **Appendix 9: Questionnaire for Key Informant Interview**

### **Questionnaire for KIIs**

#### **Introduction of interview**

My name is.....a researcher from the Royal University of Agriculture in Phnom Penh. I would like to inform you that the Royal University of Agricultural is conducting the research on 'The Behavior of Household and Personal Microcredit Usages' under the collaboration with Sansom Mlup Prey organization. The outcome of this research aims to establish the pathway for developing and improving the management of biodiversity in Chaeb Wildlife Sanctuary in Chaeb district and Kulen Promtep Wildlife Sanctuary in Preah Vihear province. Therefore, I kindly ask you to participate in my questionnaire survey on the understanding of behavior of using loans in the study areas. We won't give you any direct benefit if you participate. We are sure that your answers will be kept anonymous. Would you like to participate in this survey? ☐YES or ☐NO

Thank you very much.

#### **Objectives of survey**

- Understanding the existing microcredit operational model in the community such as key lenders, products, and characteristics of each actor;
- Defining the clear definition of each model of microcredit operational model in the commune;
- Analysis overall perspectives on the status of debt, typical individual debt levels (as well as extremes), purpose of loans, quality of credit assessments and default rates with documented anecdotal examples, reason of falling into debt and strategy to deal with debt;

- 
- Identify the gaps and challenges of operation of loan providing of lenders and repayment of borrowers in the community.
1. In your village/commune, what is the percentage of people having debt, and percentage of people in extreme debt? Please explain the level of debt.
    - If possible, could you provide us some list of people who are having current loan or debt?
  2. What are the peak years of MFI or using loan common in your area? Why?
  3. Who are the loan providers in your areas?
  4. Who are the most popular in providing loan to people in your areas?
  5. How can they provide loan in your area? Did they ask permission from you?
  6. Could you explain in detail about the process of providing loan from those actors to people?
    - **MFI (Formal loan):**
      - How they providing loan to people?
      - What are the main documents required from getting loan?
      - What are the main criteria of people to obtain different size of loan? Individual or group?
      - What is the maximum size of loan that people in your area obtained?
    - **Private money lender (Informal loan):**
      - How they providing loan to people?
      - How was the interest rate?
      - Do they require anything for collateral? If yes, what are they?
      - What are the main criteria of people to obtain different size of loan? Individual or group?
      - What is the maximum size of loan that people in your area obtained?
    - **SHG (Informal loan):**
      - How they providing loan to people?
      - How was the interest rate?
      - Do they require anything for collateral? If yes, what are they?
      - What are the main criteria of people to obtain different size of loan? Individual or group?
      - What is the maximum size of loan that people in your area obtained?
    - **Input supplier (Informal loan):**
      - How they providing loan to people?
      - How was the interest rate?
      - Do they require anything for collateral? If yes, what are they?
      - What are the main criteria of people to obtain different size of loan? Individual or group?
      - What is the maximum size of loan that people in your area obtained?
    - **Others?**
  7. Do you observe after using loan do people have positive impact on their livelihood? If yes or no why?
  8. Could you identify the most impactful lender in improving people's livelihood? Why?



9. Do you think that using loan is a reason for forest clearance and land encroachment in your village? If yes, can you explain in detail about this?

**Table 1: Proposed table for discussion with local people and authority**

Factors	Size of impact (scale: strong, medium, low)	Speed (scale: strong, gradual, low)	Capacity to response (scale: strong, moderate, low)
Extreme debt			
Agricultural and expansion			
Logging			
ELC and SLC			
Road construction			
Health			
Others.....			

10. Are there any people who face financial crisis while using loan? What did they do?  
 11. Do you support them to solve on this challenge? If yes, what did you do?  
 12. What are your suggestions for overall loan operations in your village/commune?

### Additional Questions

13. As a village/commune chief agent,  
 14. What is your role concerning MFI or using loan practices in your area?  
 15. What do you do?  
 16. What can you NOT do? And why?  
 17. What challenges are you facing?  
 18. 6.2 Do you interact with the MFI or use a loan administration/village/commune representative?  
 About what?  
 19. What are the main issues/difficulties you face with them (villagers, private money lenders, MFIs)?  
 20. Do you think villagers should be stopped/ reduced borrowing the loan from private money lenders or MFIs? Why?



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21. What are the difficulties to do so?
  22. Who is/ should be responsible for this?

## Appendix 10: Photos of Focused Group Discussion and Household Survey

