



# The 3rd Lao Census of Agriculture 2019/2020



**The National Supervising Commission on the 3<sup>rd</sup> Lao Census of Agriculture  
2019**

**THE MAIN REPORT**  
**The 3<sup>rd</sup> Lao Census of Agriculture**  
**2019/2020**  
**(Volume 1)**

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## Preface

The Third Lao Census of Agriculture (LCA) has been authorized by the Prime Minister of Lao PDR, in accordance with the Agreement No. 46/PM, dated 31-May-2017 by entrusting the Overseeing Committee at the National Level in accordance with the Agreement No. 82/PM, dated 01-Dec-2017 that is led by the Deputy Prime Minister, Minister of Finance as the Chief of the Overall Overseeing Committee and the Minister of Planning and Investment as the Deputy Chief of the Overseeing Committee. The Overseeing Committee is comprised of: the Chief of Lao Statistics Bureau (also the Standing Member); the Deputy Ministers of Agriculture and Forestry, Finance that lead and oversee the implementation. For the provincial and capital level, there are the designation of the Chief and the Overseeing Committee at each level, that is led by the Deputy Mayor of Capital, Deputy Provincial Governor as the Chief; there are the Director of Planning and Investment Department as the Deputy Chief of the Overseeing Committee; there are the statistics centers at the province, capital, district, and city in collaboration with the various departments and some offices that are integrated as the Census Office Committee across the country.

The III Lao Census of Agriculture 2019/2020 refers to the collections of statistics at the macro level covering all the provinces, districts, villages across the country during the household registrations and determinations of the major representatives in terms of in-depth census. The census is conducted every 10 years. Previously, there have been 2 censuses namely: the I Census was in 1998/1999 and the II Census was in 2010/2011. The information collected from the census is utmost beneficial to the monitoring of the changes of structure of the agricultural production across the nation over the past 10 years; the development of social-economic developments at the grassroot level as well as at the village level. Also, it is beneficial for the planning of the improvement of the collection-reporting regime in terms of the information on administration; the creation of indicators of the agricultural statistics to monitor the assessment of the implementation of national social-economics development plans and the sustainable development plans, especially in the agriculture sector. The determination, design of contexts and scope of the information collection and compilation of the III Census of Agriculture is pursuant to the World Programme for the Census of Agriculture (WCA) 2020 for retaining the questionnaires that have been previously conducted and aware of the actual circumstance, conditions as well as the production types of our country. The contexts and scope of the information collection is varied and comprehensive compared to the previous 2 censuses. Also, the information from the census

is used as the reference of the design, planning of the information collection of the census in terms of any particular representation until the IV Census 2029/2030.

Once the implementation of the census is finalized, the Census Office, especially the Technical Team of Lao Statistics Bureau and the Ministry of Agriculture and Forestry shall process, analyze, and create the outcome reports of the census through the technical processing and the discussion meetings under concrete results. Specially, this census has received the technical assistance from the Food and Agriculture Organization (FAO) that has been involved since the beginning in terms of the design of census, the determination of representatives, in-depth context and the photographic collection-transmission tools, as well as the management and inspection of the quality of data under systematic manner to ensure that the outcome of the census is concise at certain level and be able to supply the needs of both public and private sectors, including the national comparison in terms of the criteria that Lao PDR to be integrated at the regional and international levels.

This census comprised of 2 volumes namely: Volume I (this Report) briefly summarizes the primary outcomes of the census, whereas Volume II refers to the in-depth report that will be presented and published at the end of 2021. Volume I is the report on the achievement of the implementation of census and the report of statistical numbers that are pursuant to the results of the collection and the inspection of the data quality that is consistent with the dynamic principles and statistical science regime. The report contains 3 main parts namely: Part 1-Introduction; Part 2-Primary Outcomes of the Agricultural Households Census that presents the agricultural yields of the households that comprised of the characteristics of the agricultural households; the agricultural productions; the land use; the irrigation use; the factors of agricultural productions; the agricultural and animal labors. Part 3 presents the main essential information on the village infrastructure and the services.

On behalf of Lao Statistics Bureau, the Deputy Chief of the National Overseeing Committee of the III Census (the Standing Committee Person) wish to express heartfelt gratitude to party and government and the administration of all levels from the local to central levels to the people of multi ethnicities for their active participations in the III Lao Census of Agriculture (LCA III) for concrete outcomes. Thanks to the overseeing committees at the central, province, capital, district, and city levels, as well as the Census Office of all levels across the nation for the implementation that has been performed under high responsibility. Thanks to the management committee and team of the national defense, public security for maintaining the social order and the information and culture sector for facilitating the dissemination of news and media through various means. We would like to praise and



thanks to the village administration and committee and the people of multi ethnic groups for their facilitation, dedication of time and sincere cooperation in providing the actual information. Special thanks to the surveyors, inspectors who have played a leading role in the information collection that is intensive through dedication and high responsibility. On this occasion, I wish to thank to the international organizations and development partners, especially the Food and Agriculture Organization (FAO) for the technical support to enable this Census to be successful and be able to meet the international standard that is highly efficient.

Lao Statistics Bureau as well at the management committee, the cabinet office committee of the census are pleased to take to recommendation and suggestions on the report in order to use as the lessons and improvement for the future work implementation, especially the creation of the II Volume. I hope that the census results will be beneficial and they will be applied into the real work. Also, I wish to urge all the sectors to continue the support, assistance, and participation in the statistics in accordance with the roles, responsibilities, and roles to enable the statistics of our country to be better efficient.

For those that are interested in accessing, use of reports and database, please contact Lao Statistics Bureau, Ministry of Planning and Investment, Dongnaxok-Neua Village, Sikhothabong District, Vientiane Capital, Lao PDR, tel: (+856-21) 214740, 216656; fax: (+856-21) 242022; website: [www.lsb.gov.la](http://www.lsb.gov.la).

**Chief of Lao Statistics Bureau, Deputy of Overseeing Committee**

**(The Standing Committee Person)**

A handwritten signature in black ink, appearing to read 'Santay', with a stylized flourish at the end.

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## Explanation of Abbreviations

CAPI	Computer Assisted Personal Interviewing, A face-to-face interview with the help of computer to record the information.
Cs-Pro	The Data entry application.
DB1	Data Base 1
DB2	Data Base 2
FAO	Food and Agriculture Organization
FTP	File Transfer Portal
LCA	Lao Census of Agriculture
PAPI	Paper Assisted Personal Interviewing
SPAR	Strategy of Agriculture and Rural Statistics
Stratum	The village group representative
SRSWOR	Simple Random Sampling Without Replacement
WCA	World Census of Agriculture handbook

## Executive Summary

The Lao Census of Agriculture is conducted once every 10 years, the I Census was conducted in 1998/1999, the II Census was in 2010/2011 and the III was in 2019/2020. The results of the previous 2 Censuses reflected the infrastructure of the planting of crops, animal production, fisheries, and forestry. It acts as a good source of information that determines the policies and social-economic development planning from time-to-time. This report is the primary Census report that aims to summarize on the achievement of the implementation of the Census and illustrate the numerical statistics of the characteristics and scenario of the agricultural productions by the households in Lao PDR in 2019/2020. The complete report and calculation will be presented in Volume at the end of 2021.

**The characteristics of the agricultural households:** The total number of households in Lao PDR are 1,241,420 households in 2019/2020 from 8,416 villages across the country. The majority of them live in the rural areas (those with road access account for 60.3% and those with no road access account for 3.2%); the urban accounts for 36.5%. The agricultural households (those who perform the agricultural production, animal production, fisheries, and forestry)<sup>1</sup> are 644,098 households in 2019/2020 that account for 52%. Over the past 10 years, the number of agricultural households in accordance with the II Census definition increased at 8.6% that illustrated that the agricultural household trends decreased from 77% (2010/2011) to 69%<sup>2</sup> in 2019/2020; the shifting of profession and the land use maybe among the causes that contribute to the decrease of agricultural households.

**The crop plantations:** The majority of the agricultural households perform the agriculture and animal productions. The households have shifted to plant more variety of crops, especially the industrial crops. In 2019/2020, it was found that 90% of the total crop plantations, the productivity of Dry season rice is higher than the Wet season rice and the Upland rice. An average nationwide rice yield is 3 tons/hectare (3 tons of Wet season rice; 4 tons of Dry season rice; and 2.2 tons of Upland rice). Meanwhile, the outstanding crops include cassava with 12,989 households involved; coffee plantation with 29,200 households involved in 2019/2020 and those involved in the rubber plantation are 57,119 households in 2019/2020.

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<sup>1</sup> Agriculture holding definition (LCAIII): Agriculture holding is account with 0.1 ha, 5 and above of cow/buffalo, pig, goat 10 and above and 50 of poultry and above

<sup>2</sup> Agriculture holding definition (LCAII): Agriculture holding is account with 0.02 ha, 2 and above of cow/buffalo, pig, goat 5 and above and 20 of poultry and above

**The animal productions and fisheries:** Apart from the crop plantations, the Census demonstrates that the animal production and the fisheries are the sector that the agricultural households in Lao PDR were still operating, especially the cattle farming (cows) over the past 10 years. In 2019/2020, even though the cow ownership ratio is an average of 5 cows per household, whereas the poultries ownership is an average of 29 per household. The fisheries and aquatic animals are operated in the pond by households that account for 91.8% of the total agricultural households. The fisheries and fish hunting in the river and natural lake account for 48% and 18% respectively in 2019/2020.

**The agricultural land and ownership:** In general, the total agricultural land is 1,559 hectares, with an increase from 2.4 hectares in 2010/2011 to 2.8 hectares in 2019/2020. The majority of the agricultural land is used in the perennial plants followed by the pasture, industrial crop plantation, and the fruit trees respectively.

**The irrigation uses and the agricultural production factors:** The agricultural households in 2019/2020 that use the irrigation are mainly for the spillway, water pump, and reservoir that account for 53%. Whereas the agricultural production factors, especially the use of modernized tools found that, the outstanding households include the use of 4-wheel tractor that has been increased from 9% 2010/2011 to 11.3% in 2019/2020 and the use of water pumps have been increased from 4% in 2010/2011 to 8% in 2010/2020.

**The labour use:** In 2019/2020, the number of agricultural professions with the age of 15 years old or older account for 64% of the overall population with age of 15 years of older. The labours with primary profession in the agriculture and secondary job in the agricultural sector account for 89% that is an increase from 74% in 2010/2011. 29% that does not receive the wages, but perform the household chores. Whereas the labour that perform other professions account for 3% that is increased from 1% in 2010/2011.

In summary, this Census demonstrates that the land ownership and use increased, the changes of the agricultural productions of the households have been shifted to more variety production techniques with an acceleration of the production towards industrialization and the use of modernized production tools gradually in expanding the foundation and production, as well as the increase of productivity.

Also, this Census demonstrates the needs of the agricultural households in the development and resolving of issues that they are currently facing in terms of the price of goods and the agricultural production factors that are not sufficient that are witnessed by: 54% of all villages responded that the production issues, including the falling of production process; 49% of all villages face the lack of seeds, 47% of all villages face insufficient water in the irrigation system. When looking at the topographic areas of the villages in the lowland, most of them face the primary obstacles in terms of the lack of labors; the



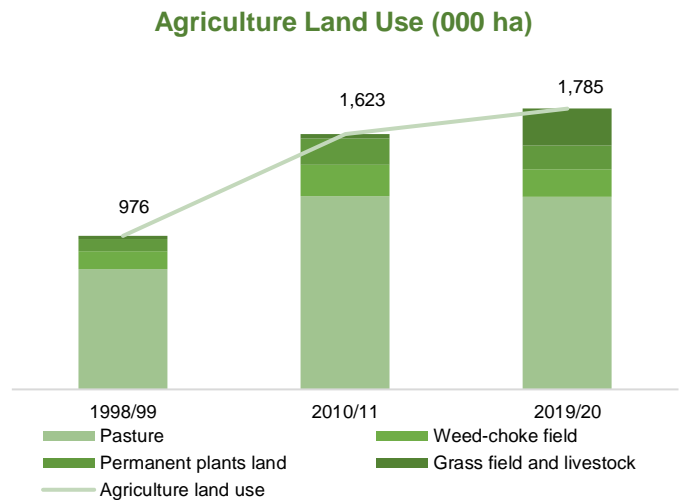
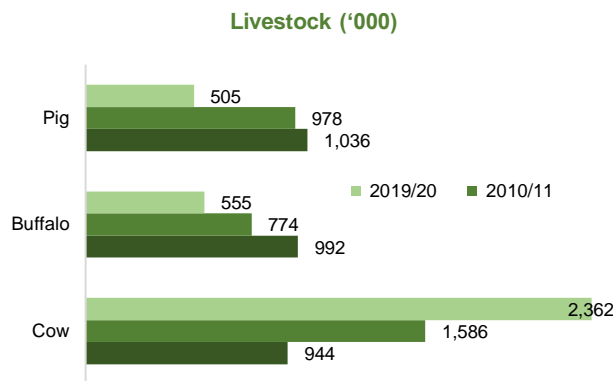
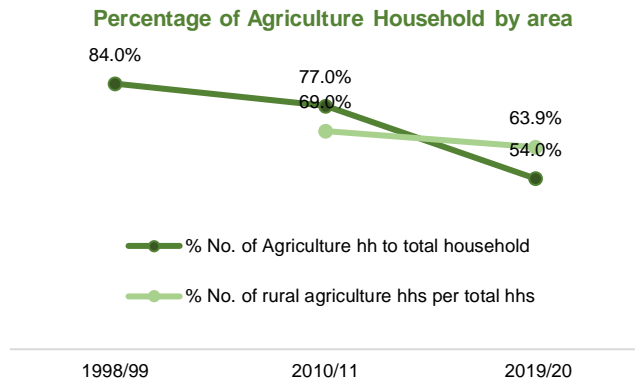
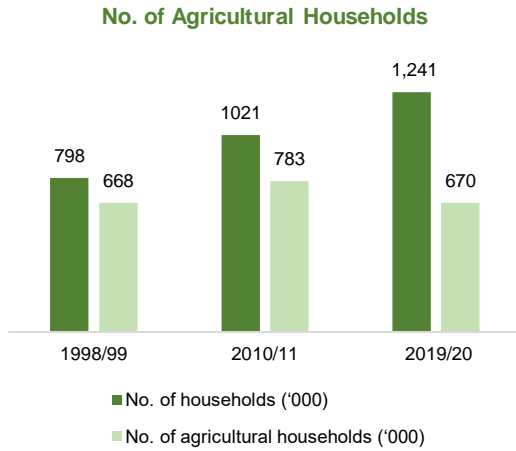
hill areas in general lack of pulling vehicles; and the plateau is facing insufficient water in the irrigation system.

The II Volume of the Report explains an in-depth analysis of the changes made to the agricultural land ownership, the changes in the behavior-methods of the productions; the production yields; the productivity in accordance with the production areas and variety of agricultural production; land use and modernized tools; as well as the production yields of the households that act as the reference and certification on the shifting towards modernized agricultural and goods productions. This Census will shift the new comparison and shall be beneficial for the improvement of the growth in accordance with the shifting towards industrialization of the under the directions and goals of the Government in the 2030 Sustainable Developments.

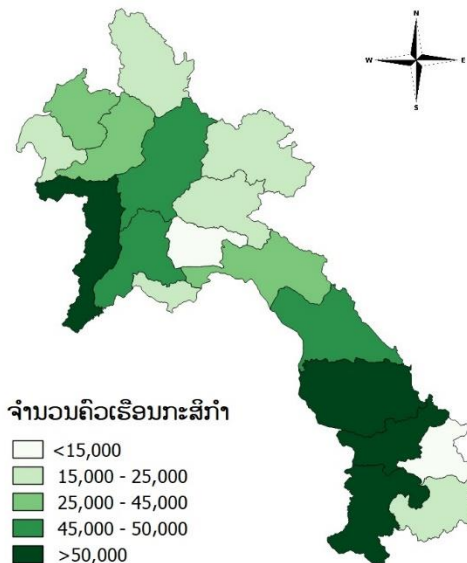
**Next plans:** In order to use as a reference in the future implementation of the Census to be more efficient and effective, Lao Statistics Bureau shall collaborate with the Food and Agriculture Organization; Asian Development Bank in the survey of production unit by the use of satellite imageries and the coordinate systems to certify the main production areas; to act as a bold reference in the land use information and the reference for the research of satellite imageries and the coordinate systems of the next Census. Also, the Census results are used in an in-depth analysis of major research including:

1. The improvement of reporting system of the agricultural statistics administration and an in-depth research of agricultural sector;
2. Used in the improvement of the forecasting of the gross domestic products;
3. Used in the analysis and survey of the agents regarding the assessment of the rice production yields and the food security, etc.

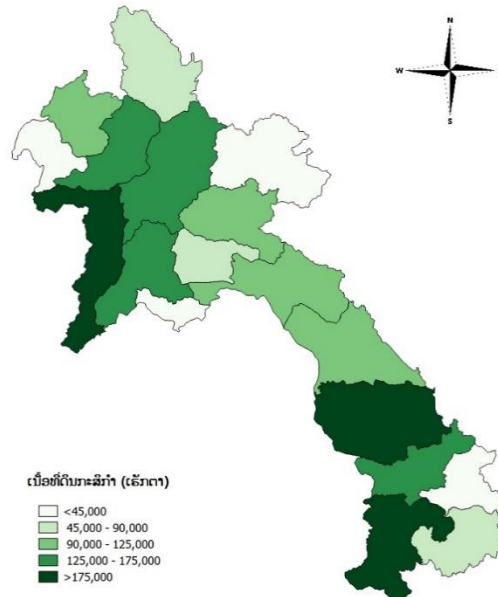
## Summaries of significant information



No. of Agricultural household 2019/2021



Agriculture Land by provinces 2019/2020



## Summary Table

Characteristics of Agricultural Households	1998/99	2010/11	2019/20	
			1 <sup>st</sup> Definition	2 <sup>nd</sup> Definition
<b><i>Agricultural Households</i></b>	798	1,021	1,241	1,241
No. of households ('000)				
No. of agricultural households ('000)	668	783	851	644
No. of agricultural households compared in % of the total household (%)	84	77	69	52
No. of rural area households compared in % of the total household (%)		69		63
No. agricultural producers ('000)	4,058	4,501		3,493
Average number of households	6.1	5.7		5.4
<b><i>Land owned</i></b>	976	1,623		1,559
No. of households ('000)				
- Less than 1 ha	36	22		21
- 1-2 ha	36	32		29
- 2 ha or more	27	46		50
Average size of land (ha)	0.77	0.9		1.3
<b><i>Agricultural land categorized by the main usage ('000)</i></b>	765	1,230		1,070
Annual plant				
<i>Weed-choked field</i>	112	198		154
Standing plant	81	168		130
Pasture field	18	26		204
<b><i>Land ownership</i></b>				
Land ownership (% comparison of land area)				
- Self-ownership	97	93		91
- Others	3	7		9
<b><i>Rice plantation</i></b>				
Land				
- Rainy season	680	929		669
<i>No. of rice planter based on the season ('000 ha)</i>				
- Rainy season	679	775		579
Sticky rice (% comparison of rice plantation area)	93	92	91	
<b><i>Large animals and poultries ('000 comparison with the total number)</i></b>	944	1,586	2,041	2,165
Cows				
<i>Buffalos</i>	944	774	601	541
<i>Pigs</i>	1,036	978	763	509
<i>Domestic chickens</i>	9,379	8,665	11,915	11,900

Characteristics of Agricultural Households	1998/99	2010/11	2019/20	
			1 <sup>st</sup> Definition	2 <sup>nd</sup> Definition
<i>Ducks</i>	1,351	1,791		1,650
<b><i>No. of agricultural households with domestic animals ('000)</i></b>	5	5.3	6.7	5.1
<i>Cows</i>				
<i>Buffalos</i>	3	3	4.4	2
<i>Pigs</i>	3	3	3.7	2
<i>Domestic chickens</i>	19	18	26	29
<i>Ducks</i>	7	8		15
<b><i>No. of agricultural machinery (% compared to agricultural households)</i></b>	7	34		63
<i>Self-owned tractors</i>				
<i>Use of tractors</i>	20	61		73
<i>Self-owned water pumps</i>	2	2		7
<i>Use of water pumps</i>	4	4		8
<b><i>Agricultural labours</i></b>	92	89		69
<i>Agricultural profession (% compared to the family member with 15 years of age and older)</i>				
<i>Working outside the ownership site (% compared to the family member with 15 years of age and older)</i>	24	24		24
<i>Agricultural households that use external labour.</i>	26	45		30

# Chapter I: Introduction

## 1.1 Background

The Census on Agriculture refers to the nationwide census that is stipulated in the Law on Statistics and the 2016-2025 Sustainable National Statistics Development Strategy and the 2030 Vision that is implemented once every 10 years. Lao Statistics Bureau, Ministry of Planning and Investment and the Ministry of Agriculture and Forestry in collaboration with the related ministries have conducted the nationwide census on agriculture for 2 times in 1998/1999 and 2019/2020. The results from the census are important information for the infrastructure developments in agriculture; agricultural land ownership; arears; land use; agriculture; animal productions; fisheries as well as the use of tools and labors in the agricultural productions. The information is beneficial for the establishment of the government policies, especially on the rural area development policy and the poverty alleviation from time-to-time.

In compliance with the Prime Minister's Agreement No. 46/PM, dated 30-May-2017, Lao Statistics Bureau, Ministry of Planning and Investment in collaboration with the related ministries have continued the implementation of the III Nationwide Census on Agriculture for 2019/2020 and the registration has been completed in 09/2019 and the data collection from the fields were completed in 11-11/2020.

The implementation of the III Nationwide Census on Agriculture for 2019/2020 is a significant milestone for the supply of agriculture information within 10 years for Lao PDR that shall act as an important reference for the monitoring and assessment of the agricultural production outputs across the nation; it is the main information needed for the final monitoring and assessment of the progress made on the implementation of the VIII Social-Economic Development Plans of the nation in the IX 5-year plan and the 2030 Sustainable Development Goals in generally. Specifically, the areas of food security production; agricultural land management; agricultural land use; irrigation use effectiveness; agriculture; animal production; and fishery. Also, it shall act as the reference of the assessment of the rural area development and the poverty alleviation at the local areas.

## 1.2 The Census Objectives

The primary objectives of the III Nationwide Census on Agriculture include:

- To collect the information on the agricultural infrastructure, including the number of agricultural households; the micro business activities in the agriculture sector namely the crop plantation; the animal production; tree plantation and fishery; the use of machinery and the agricultural tool; the use of fertilizer and the agriculture labor; the agricultural land use; the land ownership and crop

plantation areas; the irrigation use and revenues from the agriculture and others (details are in the Appendix);

- To establish the national database and to continue the design of census agent and specialized census in the future that is a systematic manner (census collection and reporting systems);
- To monitor the changes made to the agricultural infrastructure within 10 years, to collect the social-economic infrastructure information at the village level and to use as the foundation for the collection of agricultural administration information and produce important agricultural indicators needed for the social-economic development plans of the nation, as well as the agricultural production plan at the local and national levels;
- To calculate the indicators in the agriculture sector and other related sectors for the assessment of sustainable development of Lao PDR, as well as the global that Lao PDR opens its policies on the regional and international integrations and to meet the objectives of the analysis by the public and private sectors in the society, as well and the educational institutions and social-economic research.

### **1.3 The Organizational Structure**

The III Nationwide Census on Agriculture for 2019 is in pursuant to the Prime Minister's Agreement on the Approval of Census and the Designation of the National Overseeing Committee regarding the III Nationwide Census on Agriculture for 2019/2020, No. 82/PM, dated 01-Dec-2017 that comprised of 5 individuals including Mr. Somdy DOUANGDY, the Deputy Prime Minister, Minister of Finance as the Chief of National Overseeing Committee; the Chief of Lao Census Bureau that is equivalent to the Deputy Minister as the Deputy Chief of National Overseeing Committee; the Deputy Minister of Agriculture and Forestry and the Deputy Minister of Finance as the Committee Members.

The Office of the III Nationwide Census on Agriculture for 2019 at the central level is established in pursuant to the Deputy Prime Minister's Agreement; the Minister of Finance; the Chief of National Overseeing Committee No. 0002/NOCCA, dated 09-May-2018 on the Designation of the Chief, Deputy Chief, and the members of the Census Office at the Central Level of the III Nationwide Census on Agriculture for 2019. The office is comprised of 1 Chief; 2 Deputy Chiefs; 19 members that are in total of 22 persons that are the representatives from Lao Statistics Bureau; Ministry of Planning and Investment; Ministry of Agriculture and Forestry; Ministry of Finance; Ministry of National Defence; Ministry of Public Security; Ministry of Natural Resources and Environment; Ministry of Home Affairs; and the Ministry of Information, Culture, and Tourism. The Census Office is located within the premise of Lao Statistics Bureau, Ministry of Planning and Investment.

The Chief of National Overseeing Committee is appointed by the Provincial and City Overseeing Committee that is chaired by the Deputy City Mayor, Vice Provincial Governor that act as the Chief of

Overseeing Committee; in pursuant to the Deputy Prime Minister's Agreement that act as the Chief of National Overseeing Committee, No. 0005/NOCCA, dated 23-Jun-2018.

Meanwhile, the Overseeing Committee at the District Level is appointed by the Recommendation made by the Deputy Prime Minister that acts as the Chief of National Overseeing Committee, No. 0005/NOCCA, dated 23-Jun-2018. The District Mayor acts as the Chief of Census Committee and appointed by the Provincial Governor and the City Mayor.

#### **1.4 The Scope and Goals of Census**

The scope of nationwide census on agriculture shall be relied on all the agricultural ownerships (agricultural producers) that are conducted within the territory of Lao PDR, regardless of the citizenship whether Lao or foreign nationals that reside in Lao PDR more than 6 months. The agricultural producers may refer to an individual household, group household, business unit with the agricultural production whether the individual or household holds the family book or not; it also covers the agricultural productions by the national defense and the public security, and the general citizens from central to local levels.

##### **The Goals of Census include:**

- The overall goal of the census during the registration phase include all the information of the villages and households in Lao PDR have been collected in terms of the infrastructure, services, and social-economic conditions across the nation;
- The overall goals of the census include the nationwide household agricultural ownership that conduct the agricultural production, fishery, and forestry that is in parallel with the registration to conduct the census on the crops, animal production from all households in the country;
- The specific goal is to select the agricultural households to be the national model that conducts an in-depth agricultural activity; the agricultural household refers to the household that owns the land 0.1 hectare or more; 05 cattle or more; 10 pigs and goats or more; and 50 poultries or more<sup>3</sup>
- Whereas the business unit in the agricultural area within the country to monitor the agricultural activities that contribute to the economy and the use of raw materials and the machinery in the production; agricultural production of other sectors, especially the productions made by the national defense sector and the public security sector that contribute to the economy and the food security that have not been implemented and expected to be commenced at the end of 2021.

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<sup>3</sup> The definition of 'agricultural household in 2010/2011' refers to the agricultural land ownership of 0.02 hectare or more; 05 cattle or more; 10 pigs and goats or more; and 50 poultries or more.

- The production yields to be collected referred to the production made during Rainy season in 2019 and during the Dry season in 2019/2020.

## 1.5 The Census Procedures

The implementation of the III Nationwide Census on Agriculture for 2019/2020 uses the interview method that conducted directly with the chief of households or any member within the family that is capable of supplying information based on the reality of the households. The implementation methods have been researched and divided into 2 processes namely:

- **The 1<sup>st</sup> phase ‘the Households and Villages Registrations’:** The registration of households and villages is conducted through the ‘Paper Assisted Personal Interviewing or PAPI’. The registration is differed from the previous two censuses, the implementation is conducted prior to the agent survey that has been conducted during June-July of 2019 and conducted alongside the registration of business unit to enable the village registration; agricultural household and business that are used as the database prior to the agent survey. Once the field work is finished, the questionnaire is sent to the Census Office at the central level for the data entry via ‘Cs-Pro’ application and aggregated into the database;
- **The 2<sup>nd</sup> phase ‘the Households and Villages Registrations’:** The census of the agents across the nation under the ‘Computer Assistant Personal Interview’ technique by the use of tablets to enable the interviewers to key-in information on the tablet on-site. However, for the interviewers with no application, the information can be checked via laptop and verify the information in the server to check the information that has been interviewed on a timely manner. In order to ensure the transmission of data from the field to the central level, the server has the information verification tool that the census office has allocated the inspectors in the server room in order to monitor the data transmission of a daily basis and inspection of the data consistency as an initial stage.

## 1.6 The Census Tools

Comply with the World Programme for the Census of Agriculture (WCA) 2020 through the use of Computer Assisted Personal Interviewing (CAPI) in the tablets to collect the agent information. The data collection is done through ‘Cspro’ application; the FTP feature for the data transmission-receiving from the field; the file sharing is done via Microsoft Share Point of Lao Census Bureau; and data backup of the field is performed on a daily basis.

## 1.7 The Contents of Data Collection

The contents of questionnaire of the III Nationwide Census on Agriculture for 2019/2020 are based primarily on the first and second census. However, the contents are improved and amended to ensure the



implementation of the Strategy on the Agricultural and Rural Areas Developments (SPAR) and the monitoring of sustainable development along with the WCA 2020. The contents include:

- The questionnaire for registration is comprised of 2 sets: The village questionnaire is to aggregate the village information and the accessibility to various services; and the household registration and economic foundation questionnaire that comprised of 3 parts namely: the general characteristics; the agricultural ownership; and the business operation.
- The questionnaire for agent interview is comprised of 12 parts namely: the household characteristics; the land ownership; the irrigation use; the crop plantation; the tree plantation and the non-timber forest product (NTFP), animal production, fishery, machinery use, access to services; agricultural labour, food security, and the environment.

## **1.8 The Selection of Agent**

The selection of agent is comprised of 2 processes including:

- The selection based on the ‘Village Frame’ list that categorizes the village group into 4 village group area (Stratum). The use of selection method under ‘Simple Random Sampling Without Replacement or SRSWOR) is capable of determining the total of 2,552 agent villages across the country.
- The agricultural household agents comprised of 16 households that have been selected through use of SRSWOR method that is the total of 40,832 households (including the back-up household agents of 5 households per village).
- Through the actual census made, there are total 2,552 agent villages across the nation, the number of agent households are 40,421 (details on the selection and the agent distribution are in the Appendix).
- Also, the field work also faced natural disaster and termination of the village group. Hence, the changes are made to 3 villages in 2 provinces namely Saravan Province and Xekong Province, there have been a replacement of 46 households due to the household migration, lack of clarity in the registration and the manual counting.

**Table 1: The Village agent distribution categorized by the province and village group**

Province	Urban Villages		Rural villages with small agriculture land		Rural villages with medium agriculture land		Rural villages with big agriculture land		Total	
	Village	%	Village	%	Village	%	Village	%	Village	%
Vientiane Capital	15	8%	23	4%	22	3%	30	3%	90	4%
Phongsaly	8	4%	63	10%	38	6%	20	2%	129	5%
Luangnamtha	6	3%	25	4%	39	6%	47	4%	117	5%
Oudomxay	9	5%	30	5%	37	5%	80	8%	156	6%
Bokeo	5	3%	18	3%	32	5%	29	3%	84	3%
Luangprabang	17	9%	71	11%	84	12%	56	5%	228	9%
Huaphanh	13	7%	145	23%	40	6%	24	2%	222	9%
Xayaboury	16	8%	18	3%	28	4%	71	7%	133	5%
Xiengkhuang	11	6%	37	6%	45	7%	48	5%	141	6%
Vientiane Province	12	6%	19	3%	27	4%	68	6%	126	5%
Borikhamxay	9	5%	9	1%	20	3%	61	6%	99	4%
Khammuane	12	6%	36	6%	58	9%	70	7%	176	7%
Savannakhet	22	11%	59	9%	75	11%	187	18%	343	13%
Saravane	8	4%	17	3%	45	7%	94	9%	164	6%
Sekong	5	3%	23	4%	21	3%	18	2%	67	3%
Champasack	13	7%	26	4%	49	7%	104	10%	192	8%
Attapeu	8	4%	8	1%	13	2%	21	2%	50	2%
Xaysomboun	3	2%	5	1%	5	1%	22	2%	35	1%
<b>Total</b>	<b>192</b>	<b>100%</b>	<b>632</b>	<b>100%</b>	<b>678</b>	<b>100%</b>	<b>1,050</b>	<b>100%</b>	<b>2,552</b>	<b>100%</b>

**Remarks:** See the Appendix for the household distribution.

## 1.9 The Training for the census staffs and the inspectors

The training is an important step for the census staffs due to the fact that they are directly involved with the census quality. This census uses the total number of 595 personnel; there are 281 inspectors at the central and local levels. The inspectors at the central level are the representatives of Lao Statistics Bureau and the Ministry of Agriculture and Forestry, whereas the inspectors at the local level are from representatives of Provincial Statistics Center, the Department of Planning and Investment, the Department of Agriculture and Forestry, and the Department of Finance. The census staffs are from the District Statistics Office, the Department of Planning and Investment, the Department of Agriculture and Forestry, and the Department of Finance.

To enable the census staffs to have comprehensive knowledge, know-how, and practices under responsibility to ensure that the information collected is performed under complete and timely manners. The major census and the training are divided into 3 phases as:

- Training for the trainers at the central level, conducted and completed from 21-Sep to 02-Oct-2020.

- Training for the trainers and the census staffs at the provincial level from 05 to 16-Oct-2020.
- Training for the provincial census staffs and the district, the training is conducted in 18 provinces on early November.

The training is conducted for 6 weeks and 1 week longer than the previous censuses, this has allowed the inspectors and the census staffs to have practical knowledge in the use of tablets and the application for data entry. The training conducted at each level has been experimented in actual households in order to ensure that the inspectors and the census staffs understood thoroughly on the contents of questionnaire, field operations, and the interview techniques.

To ensure that the census staffs have comprehensive knowledge on the contents and counting techniques, the Census Office has created the recommendation handbook with the following contents:

- Handbook on the content inspection and the use of inspection content on tablet.
- Handbook for the census staff;
- Handbook on the use of tablet and data entry tools, data submission to the database.

Also, there are various teaching lessons for distribution that are embedded in the tablets to allow the census staffs to use and review while working on the field.

### **1.10 The Field work implementation**

The duration of the field work operation is from 15-Nov-2020 to 15-Dec-2020 and the data transmission from the areas with no internet coverage is concluded on 25-Dec-2020 nationwide. The implementation is divided into 4 levels namely:

- The census office at the central level is responsible for the focal point of coordination between the census office at the central level and the provincial level, it is responsible for the census design; creation of handbook; give recommendation on the establishment of census plans; progress monitoring; resolve various issues during the field work; act as the judge on the replacing of agents and other field issues. There are 2 inspectors from the central level and station in 18 provinces that are the representatives from the census office at the central level from Lao Statistics Bureau and Ministry of Agriculture and Forestry that are responsible for the coordination between the census offices at the central and provincial levels; monitor the field operations; ensure that the census is performed in accordance with the plans and contents set.
- The census office at the provincial level has the role in establishing the census route in the province in accordance with the plans determined by the central level, designate the inspectors at the provincial level for the census; make progress report and notify the issues from the fields on a daily basis for a timely problem solving on the field. The inspectors at the provincial level are appointed by the

provincial statistics centers and the Department of Agriculture and Forestry that are stationed in every district that act as the representative of the field surveys until completion.

- The census office at the district level acts as the focal point for the coordination among the teams of census staffs; selection of the census staffs that meet the criteria; establishment of the field implementation plans of each census team based on the overall plans of the provincial census; monitor the daily census on the field of each village and report on the progress; issues and outstanding issues of the field in order to report to the provincial and central census office to resolve on a timely manner. There is 1 inspector at the district level for a team with the roles in being a part of the census team, act as the chief of the census team that conducts interview with each village; correct the errors from the field, give recommendations, resolve the field issues along the recommendation handbooks of the central level;
- There are 595 census staffs to conduct the information collection from the field. They are the staffs from the district level, including the District Statistic Office; the District Office of Planning and Investment; the District Office of Agriculture and Forestry. The census staffs have been trained at the province for 2 weeks; have been experimented in the actual interview; the field work preparedness; they have the roles in establishing the census plan at the village and household agents as assigned, comply with the handbook on census under strict manner, make a progress report on a daily basis to the inspectors at the district and census office at the district level.

### **Field work monitoring and correction**

This census uses 1,255 tablets, the staffs use them for the interviews that are blends of on-line and off-line, once the interview is completed, the data is submitted to the server of Lao Statistics Bureau Database 1 (DB1); the inspectors at the province and district levels with the census team shall verify the data on a daily basis and submit the data to Database 2 (DB2); the inspector at the local level shall re-verify the data and re-submit the error data to the census staff to make improvement and re-submit to the database. The inspectors at the census office shall determine the identification number of the agent household and codes of the changes made to the households. Hence, the second database shall act as the final field data that has been verified in terms of data quality from the fields.

### **1.11 The Summary, revision, and processing**

Once the field work is completed, the DB2 database shall be cleaned based on the correction of the index code; question meaning, question skips, unit code, missing value, blank answer and others based on the statistician science in order ensure data quality. Use of STATA tool in the information processing and error correction, correction of information from January to March 2021 and the report analysis and drafting are from March to May 2021.

The inspection and data correction from the census are performed under 3 processes include:

- **The 1<sup>st</sup> step:** refers to the inspection of the database structure to indicate the completeness of questions in the database and questionnaire, the coding of questions and answers, the number of replies in the description, and the overlapping of the household agents.
- **The 2<sup>nd</sup> step:** the re-checking step for the correct criteria of the answer made to each question and the finding of answer with irregular values (Outliners). The checking method of this process refers to the checking of the conditions of question skipping, the checking of answers that are beyond the specification, the consistency check of the answer and the irregularity value check. Whereas the finding of answers for the Outliners shall conform to the data distribution principle at the level of 95% of the maximum threshold.
- **The 3<sup>rd</sup> step:** it refers to the resolving process and data replacement on the information with Outliners with the changes made to the answers through the data distribution principle at the level of 95% of the maximum threshold and the use of average value of the household agent within the same area.

The reports and syntax in the correction have been made as a reference and transparency in accordance with the principles and match with the copies of the next census.

### **1.12 The information that is not answered for each component**

Among all the households that are the agent of agricultural households, there are 230 households that the data has not been collected that accounted for 0.57% of the total due to the movement of village, there was no interviewees and there had not been an agricultural production for more than 12 consecutive months prior to the actual census date. There are 51 households that failed to answer all the questions that accounted for 13% of the total households interviewed. For 51 households that failed to answer all the questions, there have been no calculation nor adjustment method whatsoever due to the small number. Hence, there is no impact on the census.

### **1.13 Data integrity and quality**

The census data from the components of the agent households is pursuant to the agents and the increment discrepancy values due to the fact that the design of the selection of agents at the levels of district, province, and the nation has low discrepancy values. Therefore, the results from the census on agriculture is different from other sources of information and firmly believed to be high accuracy. The census results may be varied from other sources, especially on the administrative reports due to the primary causes as:

- The census covers only the agriculture household, whereas the crops that are planted and the domestic animals raised by private companies, state enterprise, cooperative farmers, and

agricultural production by the national defense and public security sectors have not been included in this census.

- The information from census at the provincial level is pursuant to the agricultural land use that is based on the households within the province rather than site of the agricultural land within the province. Another existing agricultural statistics information within Lao PDR is based on the site of the land within the province that has caused significant impact on the urban areas.
- The field work implementation of the census on agriculture nationwide has been shifted from the March-April 2020 to November-December 2020 due to the Covid-19 pandemic. Therefore, the III Census on Agriculture Nationwide is complied with the Orders on the Preventative Measures on the Pandemic Outbreak. This means, the timetable for the training and field census have been shifted.

**In addition, we observe that there are some limitation and areas of attention in the comparison of the indicators in some areas in the previous censuses due to the fact that this census has determined the:**

- The areas of the annual plants in the census have been recorded from the households that have the plantation areas of 100 m<sup>2</sup> or more, whereas the areas that are lower than 100 m<sup>2</sup> have not been recorded. However, in principle it does not affect the quality of this census. However, the data comparison on the previous data shall consider an in-depth analysis or overall forecasting.
- The areas of the standing plants with the areas over 100 m<sup>2</sup> or 10 standing timbers or more, whereas the areas that are lower than 100 m<sup>2</sup> or 10 standing timbers have not been recorded in the census due to not being classified as the ownership of the standing plants.
- Whereas the ownership of the planting forest has been recorded from the households that have the plantation areas of 500 m<sup>2</sup> or 0.05 ha or more, whereas the areas that are lower than 0.05 ha have not been recorded in this census due to small number and does not affect this census.
- The livestock is recorded by the number of domestic animals in the households on the census data, whereas the data collection of the livestock from other sources may be varied when the reference is made.
- The agricultural labor census has been recorded from the household members with the ages between 15-75 years old and the main agricultural production or back-up activities. Hence, there are a number of difficulties when it comes to the direct absolute comparison with the previous censuses that have set the criteria for the age at 10 years or older.

For these reasons, the reporting team has conducted the comparison of some numbers regarding the annual plants, areas of the standing plants, and number of domestic animals on the census on agriculture and we found that the results are lower than the reporting due to the fact that there have been variations in the data collection methods, including: the census has been conducted via direct interview with each household, whereas the reporting information received from the local reporting has been facing difficulty when it comes to the direct comparison in the methods and the collection methods may differ. Hence, both sources of information are good and support the consistency among them, as well as act as a tool and urge to improve the registration system and establish the registration statistics under systematic manner in the future.

The information at the village level in general is fairly good in terms of quality that the village administration has had payed attention in the contribution and cooperation in this census. The information at the provincial level is varied compared to the 2010/11 and 2019/20 censuses due to the fact that Xaysomboun Province has been separated in to 2 provinces namely Vientiane Province and Xiangkhouang Province, for this matter, the analysis team and the reporting teams have aware of and payed attention to.

In summary, even though there has been difficulty in the components of household information in terms of monitoring and control that may cause the error in either agent or non-agent, but we have had an attempt from the provincial overseeing committee and the district level that have played closed overseeing and inspection; the census staffs have been well trained; the census staffs and the inspectors have coordinated well at the field. Importantly, during the information processing phase, there has been the verification and checking of information in both qualitative and quantitative under systematic manner. Hence, this census has minor errors and the quality of information at the household level is fairly good.

#### **1.14 Data integrity and quality**

Through the implementation of the census, we can summarize the challenges and lessons learned in brief as the following:

- **The registration and the field census shall have a gap:** The registration was conducted in July 2019 and the census was conducted in November 2020. This census has been adjourned in the field implementation due to natural disaster in 2019 and the Covid-19 pandemic in 2020. So that the registration phase is far from the agent survey and enable the discrepancy among the village and household registrations, including: some household registrations are incorrect and there have been some movement;
- **The location of the village and difficulty in the accession to villages and households:** Due to the fact that the road access in the rural areas are difficult to access; the distribution nature of the agent households; the distant households; limited signal coverage of the telephone and internet that have made it difficult to download data for correction within the villages. Also, the field work phase refers

to the production phase (cultivation of yields) of the agent households that require for the interview at night that have caused the delay in the census and prolong implementation;

- **The climate condition and the vehicles for the census:** Referred to the storms in some areas that have caused difficulty in the transport; requirement of the replacement of villages and the agent households. The vehicles for the census work are not sufficient, the majority uses their own vehicles for the census and budget constraints for the repair and maintenance.
- **The budget constraints and the advertisement for dissemination:** Due to the budget constraints of the census, there is no funding for the provincial level overseeing committee and the district level for the field work monitoring to conduct the propaganda that was not to be done in an in-depth and breadth level in many provinces. There have been only some provinces that utilize its budget to perform the activities. Even though there have been several attempts that are made, the implementation has not been thoroughly well.
- **The census staffs and inspectors:** Even though all the census staff and inspectors have been thoroughly trained, there have been some that have limited skills in the tablet use and comply with the handbooks that have been demonstrated by the incorrect data entry and time-consuming of error correction.

#### **Lessons learned:**

- **There has been the administration of the overseeing committee and the census office of each level:** there has been a leadership and overseeing work on the implementation of work at each level that has been performed continuously and consistently;
- **The preparation of the supply of tools and equipment:** The early preparation is needed prior to the field implementation in order to avoid the confusion when making delivery to the field and losses of the equipment;
- **Be aware of the back-up census staffs and inspectors:** In order to avoid the risks that might be occurred and able to substitute during the field emergency, this census faces difficulties in some provinces in the case of death of injury of the census staffs or inspectors. Despite the budget constraints, but the next census shall focus on the back-up census staffs and inspectors;
- **During the registration phase and the agent survey:** The continuous monitoring is needed (not too far) to ensure that the real household interview of the agent survey has no movement;
- **The census office shall consider the mitigation plan at early stage:** For the villages in the remote areas with on internet connection, to enable to interview to be completed as planned, the closed collaboration with IT unit is required and the be aware of the data submission at all times and after leaving the agent village;



- **The dissemination:** It is among the important works to enable the civilians, especially those in the rural area to understand on the importance of the census, so that all sectors will acknowledge, understand, and cooperate at the fullest capacity to the census staffs;

### 1.15 The Definitions and contexts used in the census

- **The household:** means the household of the individual or group of people that live together or perform the daily lives on a regular basis. Typically, the household is comprised of: husband, wife, children parents, child-in-law, children, relatives and others that are non-relative. There are 2 types of households namely: the individual and group households.
- **The chief of household:** refers to those that has a role and gained respect from the family members, including the welfare caretaker and the individual who can give comprehensive information on the social-economic status, the chief of the household can be either male or female.
- **The agricultural household:** refers to the household that owns the agricultural land of 0.1 hectare or more; 05 cattle or more; 10 pigs and goats; and 50 poultries or more.
- **The agricultural activities:** refers to seeking of resources of plantation and natural animals, including the plantation, animal production and domestication; exploitation of timber and other crop plantation, animal product or cattle products or from nature and yields from the plantation or animal production, animal hunting and other activities associated with the forest plantation and exploitation.
- **The Agricultural Holding:** means unit that performs the agricultural production that comprised of the animal production and partial or total land use for the agriculture production regardless of the production type, organizational type or production size. The management of production may refer to the households of the individual, group, joint venture between individual and enterprise, company unit or government unit. The land ownership may comprise of 1 land sheet or more within the same or different territory (WCA 2020).
- **The cooperative farming:** refers to the group business administration of the micro-sized entrepreneur, including: the farmers, handcraft technicians, merchants, and other professions that have voluntarily establish the cooperative farming with the objectives support each other and exchanges of funding, experience, and technique in the business operation, production, merchant or services to achieve the business operation, production, commerce and services in order to achieve the business, including the assurance on the social welfare among the family members and households.
- **The agricultural land:** refers to all the land that the household owns for agricultural production in both Rainy and Dry seasons, including: the land for agricultural production, animal production, fish pond, aquatic animals, and crop plantation areas.

## Chapter 2: The Main Results of the Census on Agriculture

### 2.1 The households in Lao PDR

The individual household refers to the household that is comprised of the individual or group of people that live together and perform daily activities of the household on a regular basis. The typical household includes: husband, wife, children, parents, child-in-law, relative and non-relatives. Whereas the census and this report refers to the characteristics of the individual households (excluding the group household)

In 2019/2020 there are 1,241 households in Lao PDR. Those that live in the rural areas with road access account for 60.7% of the total households and those that live in the rural areas with no road access account for 3.2%. Compared to the previous censuses, we found that the number of households increased from 1,021 households in 2010/2011 to 1,241 in 2019/2020 (Figure 1 and 2).

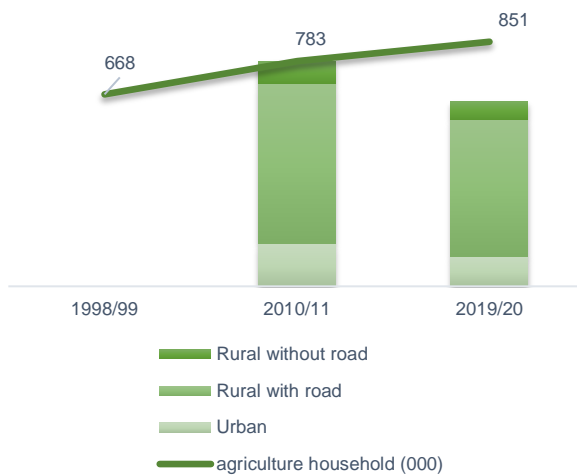
**Table 2: The number and percentage of the households categorized by the urban/rural areas, and province**

Province	Urban		village Type Rural areas with road access		Rural areas with no road access		Total	
	household	%	household	%	household	%	household	%
Vientiane Capital	145,255	78.9	38,745	21.0	199	0.1	184,199	100
Phongsaly	5,295	15.8	26,215	78.1	2,060	6.1	33,570	100
Luangnamtha	12,472	35.3	22,051	62.4	790	2.2	35,313	100
Oudomxay	15,809	26.1	39,067	64.4	5,786	9.5	60,662	100
Bokeo	8,590	26.1	23,959	72.9	318	1.0	32,867	100
Luangprabang	27,840	32.9	54,058	63.9	2,751	3.2	84,649	100
Huaphanh	10,608	21.7	31,829	65.2	6,352	13.0	48,789	100
Xayaboury	31,147	41.5	43,265	57.6	682	0.9	75,094	100
Xiengkhuang	13,318	30.6	28,037	64.5	2,137	4.9	43,492	100
Vientiane Province	23,311	30.2	53,633	69.4	372	0.5	77,316	100
Borikhamxay	20,153	37.3	31,496	58.3	2,397	4.4	54,046	100
Khammuane	16,501	23.2	52,653	73.9	2,115	3.0	71,269	100
Savannakhet	39,550	23.4	125,703	74.3	4,003	2.4	169,256	100
Saravane	12,524	17.5	57,472	80.5	1,414	2.0	71,410	100
Sekong	9,709	44.6	11,841	54.4	232	1.1	21,782	100
Champasack	37,135	28.3	85,419	65.2	8,512	6.5	131,066	100
Attapeu	10,667	34.2	20,158	64.6	390	1.2	31,215	100
Xaysomboun	7,450	48.3	7,975	51.7	-	-	15,425	100
<b>Total</b>	<b>447,334</b>	<b>36.0</b>	<b>753,576</b>	<b>60.7</b>	<b>40,510</b>	<b>3.2</b>	<b>1,241,420</b>	<b>100</b>

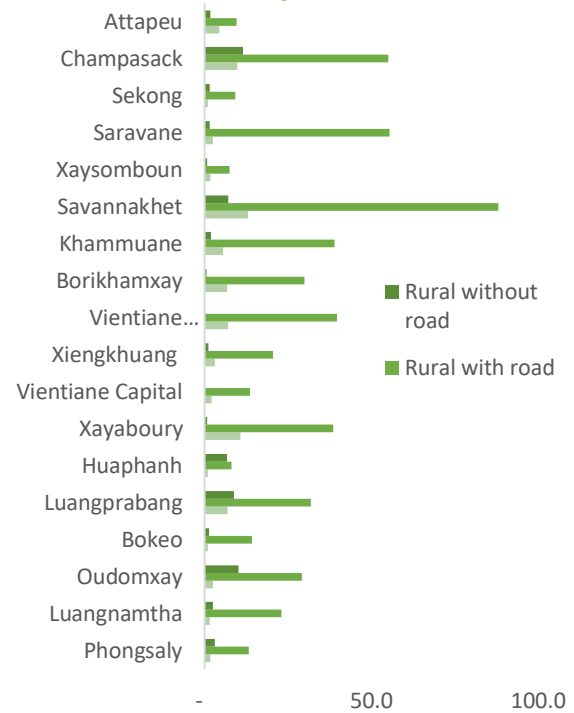
## 2.2 The agricultural households

The agricultural households refer to the household that perform the agricultural activities, these include the crop plantation, the animal production, fishing, and forestry that own the agricultural land at least 0.1 hectare or more; 05 cattle or more; 10 pigs and goats or more and; 50 poultries or more. The results of the III census on agriculture nationwide in 2019/2020 found that: across the country, there are 644,098 households. Compared to the previous censuses that use the same definition and we found that the number of agricultural households increased from 782,939 in 2010/2011<sup>4</sup> to 851,000 households or 8.6% increase. The majority of the agricultural households are within the rural areas with road access at 74.9%, whereas 9.6% has no road access and the urban areas account for 16% (Figure 1 and 2).

**Figure 1: The number of agricultural households divided by area**



**Figure 2: The number of agricultural households divided by area in 2019/20**

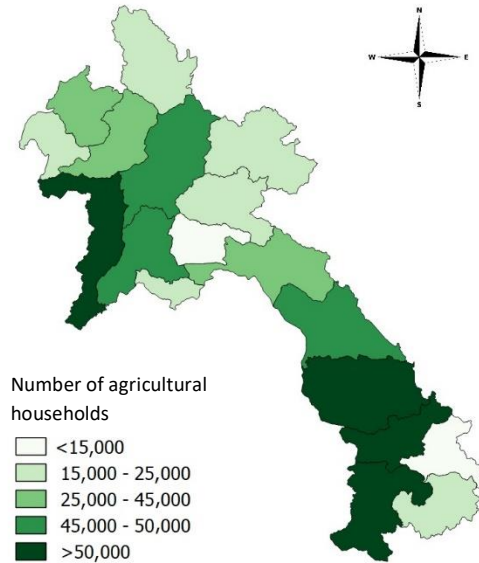


Source: The Census on agriculture nationwide in 1998/99, 2010/2011 and 2019/2020

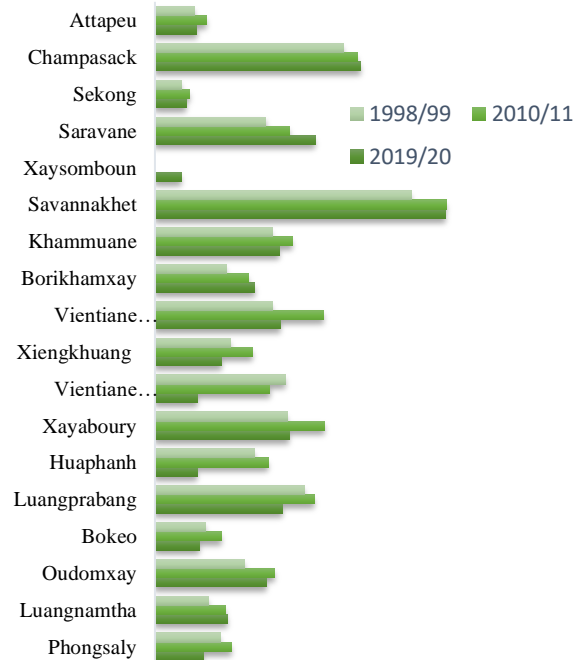
Figure 3 and Figure 4 shows the distribution of agriculture household by province. We found that the majority of the agricultural households reside in the provinces of Savannakhet, Champassak, Salavan, Xayaboury, and Luangprabang that account for 17.2%, 9.1%, 6.9%, 8.2% and 7.8% respectively.

<sup>4</sup> The agricultural household refers to the household that owns the agricultural land of 0.1 hectare or more; 5 cattle or more; 10 goat and pigs; and 50 poultries or more.

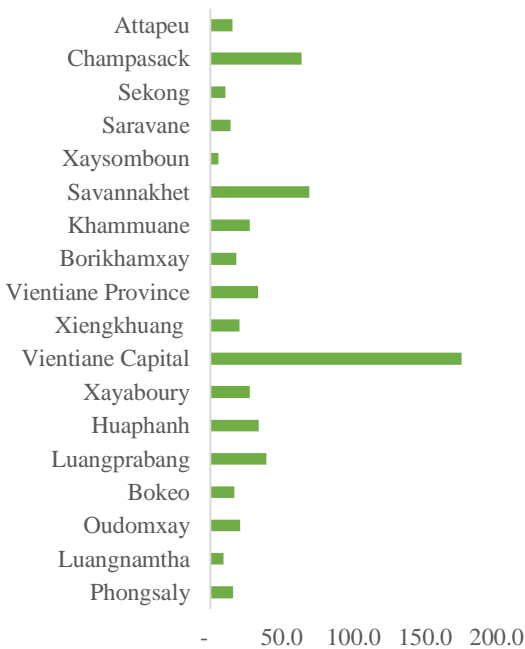
**Figure 3: The distribution map of the agricultural households 2019/2020**



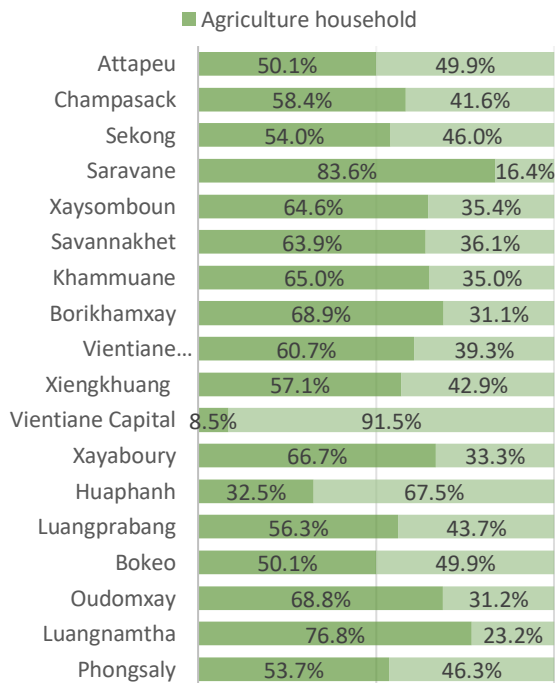
**Figure 4: The distribution of agricultural households 2019/2020 by province**



**Figure 5: The distribution of non-agricultural households divided by province in 2019/20**



**Figure 6: The ratio of the agricultural households in 2019/20 divided by province.**

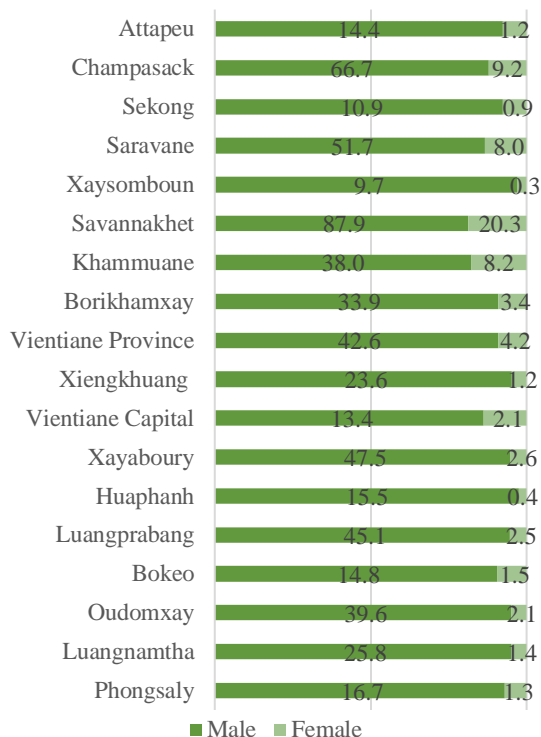


Source: The Census on agriculture nationwide in 1998/99, 2010/2011 and 2019/2020

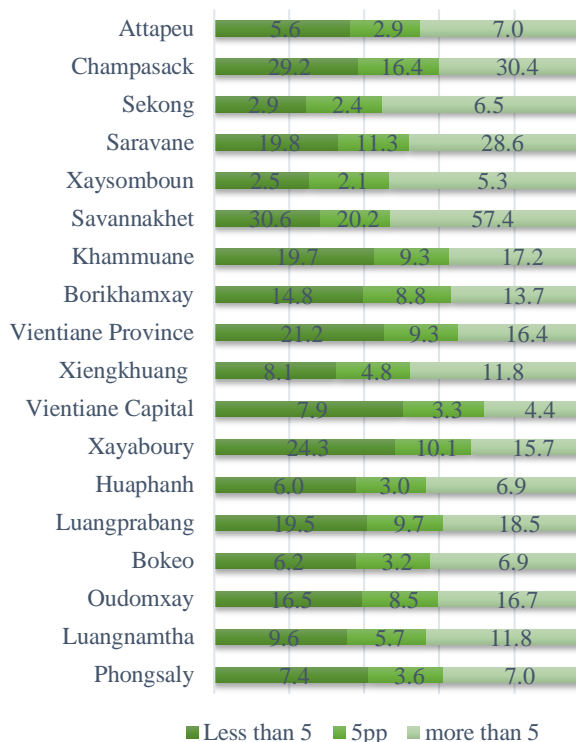
In the Figure 5, it illustrates that in 2019/2020 the non-agricultural households account for 48% of the total number of households, the majority live in Vientiane Capital, followed by Champassak Province and Savannakhet Province that account for 88.9 %; 55.5%; and 34.5% respectively. Figure 6 illustrates the ratio of the household in each province in 2019/2020; the majority of the households in the province are agricultural-households. However, there are non-agriculture households in the province of Borikhamxay, Luangnamtha, and Phongsaly that account for 89%; 56%; and 49% respectively.

Figure 7 indicates that the majority of the agricultural households have the family members of at least 5 persons of more. In 2019/2020, there were 268,108 households that have more than 5 family members or accounted for 41.7% of the total agricultural households. Whereas the agricultural households with the family members of 5 or lower accounted for 37.6% and 20% respectively. The provinces that have the agricultural households with the family member of more than 5 are in Savannakhet at 58,000 households or equivalent to 9% of the total agricultural households.

**Figure 7: The family size of the agricultural households**



**Figure 8: The gender of the agricultural households in 2019/2020 divided by the province**

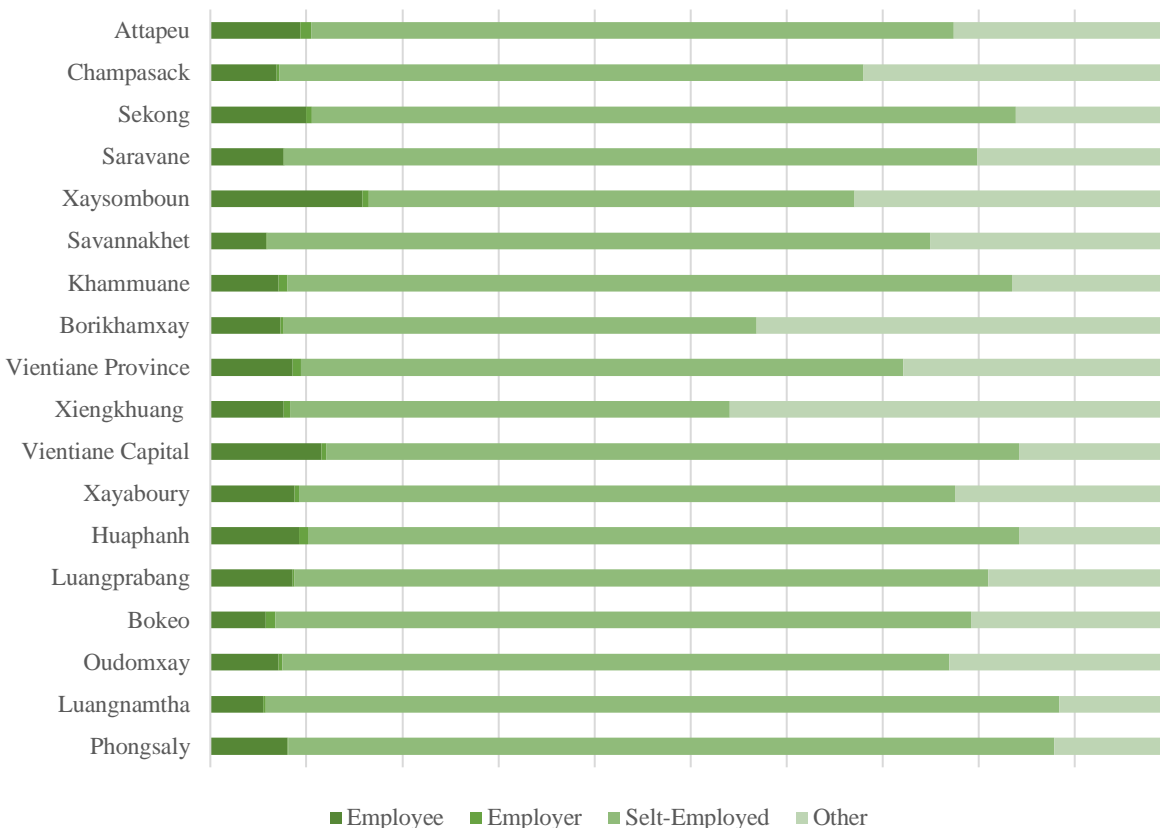


Source: The Census on Agriculture Nationwide in 2019/2020.

The majority of the chief of the agricultural households are male, in 2019/2020, the male chief of households account for 90%. The majority of the female chief of households are in Savannakhet Province that account for 30.5% of the provincial agricultural households, followed by Champassak Province and Khammoune Province that account for 10.2% and 10% respectively (Figure 8).

The majority of the chiefs of agricultural households in 2019/2020 are self-employed that account for 66.5%; the employees accounted for 8.7%; the employers accounted for 0.4% and other profession account for 24.4% (Figure 6). When observing by the province, the majority of the chief of agricultural households are self-employed, especially in the provinces of Champassak, Saravane, and Khammoune that account for 18%, 8%, and 7% respectively.

**Figure 9: The primary profession of the chief of the agricultural household in 2019/2020 divided by province.**



Source of information: The Census on Agriculture Nationwide in 2019/2020.

### 2.3 The agricultural land use

The agricultural land use refers to all the land that is owned by any agricultural household during the Rainy and Dry season, including: the lands for agriculture; animal production; fish pond; aquatic animals; crop plantation and others. In 2019/2020, the total agricultural land areas are 1.56 million hectares, compared to the previous 10 years, the agricultural land decreased 1.62 million hectares (the annual plant decreased from 1.23 million hectares in 2010/2011 to 1.07 million hectares in 2019/2020. The land use of standing plant also decreased from 168 thousand hectares in 2010/2011 to 130 thousand hectares in 2019/2020. On the contrary, the outstanding is the land use from the pasture and the pasture for animals

that are minor compared to the previous 10 years, the land use in the area has experienced a high increase from 26 thousand hectares in 2010/2011 to 204 hectares in 2019/2020 (Table 3).

**Table 3: The land use of the agricultural households in Lao PDR in 1998/99, 2010/11 and 2019/20**

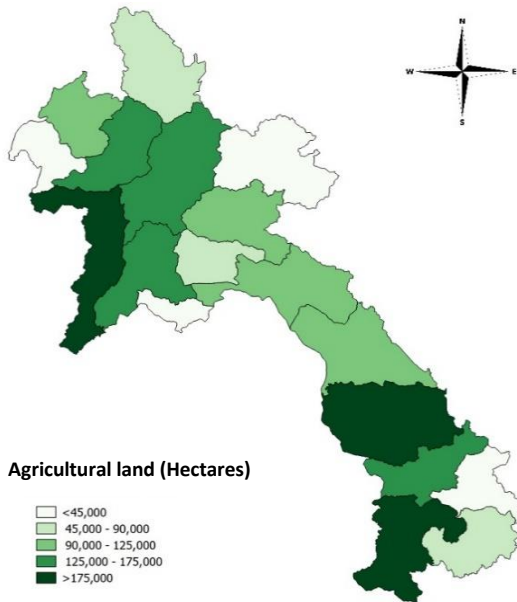
Land use	Area ('000 hectares)		
	1998/99	2010/11	2019/20
<b>Agriculture land</b>	<b>976</b>	<b>1,623</b>	<b>1,559</b>
Temperary crop land	765	1,230	1,070
Weed-choked field.	112	198	154
Permanent crop land	81	168	130
Pasture and animal feed	18	26	204
<b>Non-agricultural land</b>	<b>72</b>	<b>377</b>	<b>210</b>
Forest and other forest	54	122	138
Other types of land.	18	125	72
<b>Total</b>	<b>1,048</b>	<b>1,870</b>	<b>1,768</b>

Source of information: The Census on Agriculture in 2019/2020.

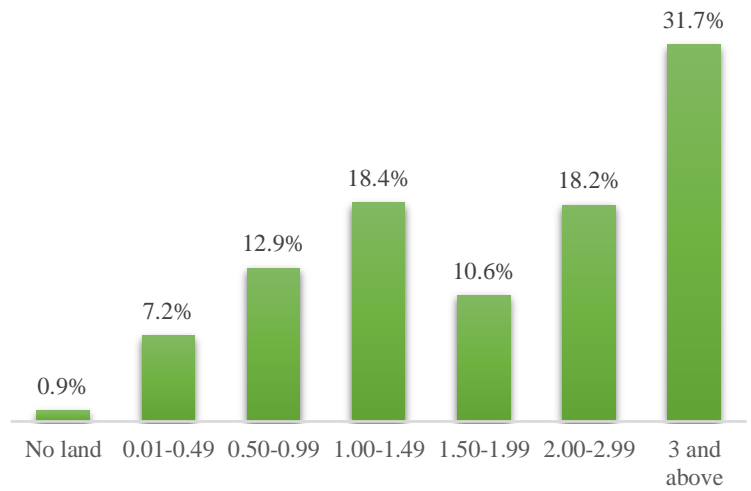
Although the agricultural land use experienced a decreasing trend over the last 20 years, but on the contrary the average areas of the agricultural land ownership increased from 2.4 hectares in 2010/11 to 2.8 hectares in 2019/20. Meanwhile, when looking at the ratio of the households with agricultural land, it is found that 50% of the agricultural households own 2.5 hectares of more of land. In Figure 11, it is illustrated that only 0.9% of the agricultural households have no agricultural land; the land ownership by the household of 3 hectares or more account for 31.7%.

In Figure 10, it is illustrated that the agricultural land in 2019/20 in accordance with the map, it is found that the province that has the majority of agricultural land include the provinces of Savannakhet, Luangprabang, Xayaboury, Champassak, and Vientiane Province that account for 16%, 9.6%, 9.4%, 8.9%, and 7.4% respectively. The decrease of agricultural land and agricultural land illustrated that the land has been used in other productions, including: in the production plants; constructions; and other projects that are not owned by the households. However, the households with no agricultural production uses the agricultural land with mega-sized production over the past 10 years. For this issue, there should be an in-depth analysis to certify this Census.

**Figure 10: The agricultural land map in 2019/20**



**Figure 11: The ratio of agricultural land ownership (Hectares) in 2019/20**



Source: The Census on Agriculture in 2019/2020.



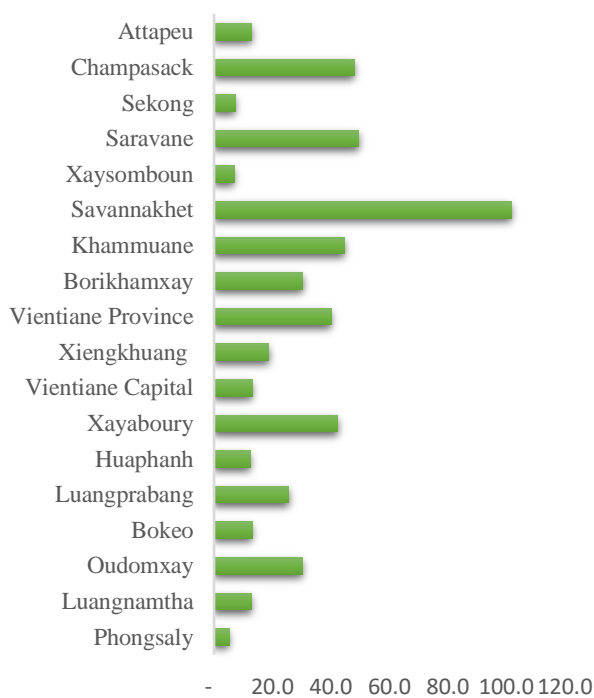
## 2.4 The agricultural production

### Temporary crops

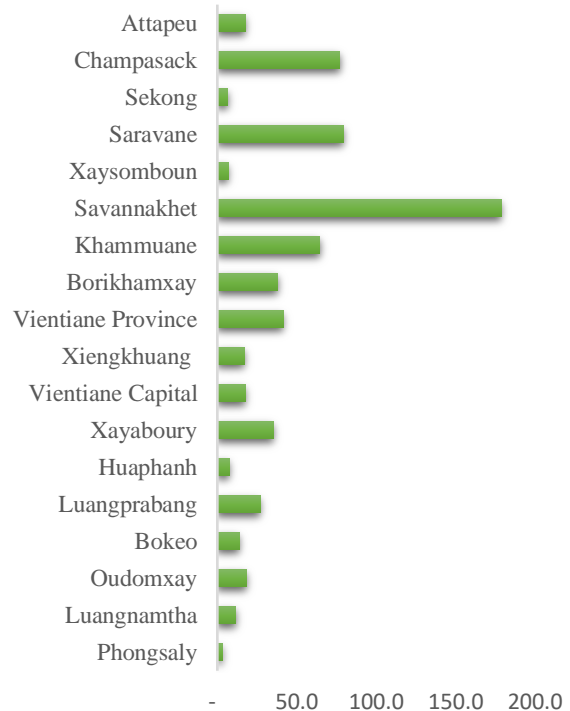
The temporary crops refer to the plant that has the lifespan less than 1 year, including: rice, but there are some crops that have a lifespan less than 2 years, including: taro, cassava, sweet basil, holy basil, hot basil, chili, eggplant, wild eggplant, pigeon pea, Chinese cabbage, red Chinese cabbage. In 2019/2020, we found that 90% of the agricultural households that plant any perennial plants, the majority of them are in Savannakhet Province that accounts for 17.3% of the total households that grow the perennial plants.

In 2019/20. We found that 90% of the total agricultural households plant rice, the household distribution of the rice plantation, we found that the outstanding household that plant the Wet season rice, include the provinces of Savannakhet, Salavan, Champassak, Xayaboury, and Vientiane Province with the percentage of 19.7%, 9.6%, 9.3%, 8.2%, and 7.8% respectively. The plantation of Dry season rice account for 24.3%, 15.2%, and 14% respectively. Whereas the upland rice plantation with the outstanding households are in the provinces of Oudomxay and Luangprabang with the percentage of 21% and 15% respectively. An average across the country is 3 tons per hectare (3 tons per hectare in Wet season rice; 4 tons per hectare in Dry season rice, and 2.2 tons per hectare in Upland rice).

**Figure 12: The number of rice planters in 2019/20 (thousand households)**



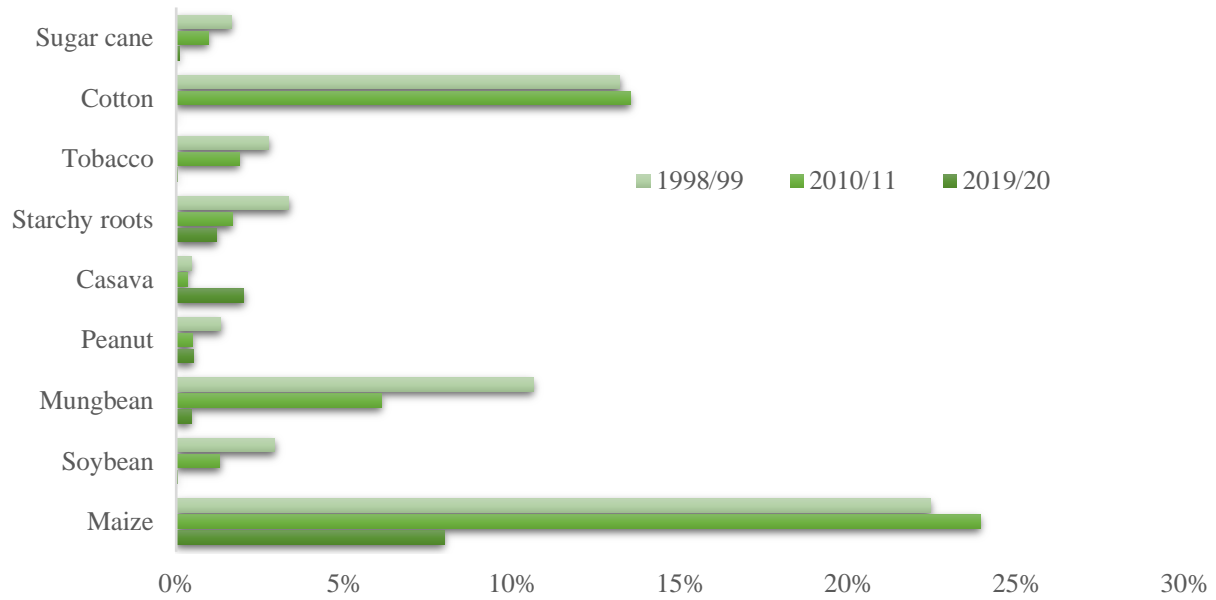
**Figure 13: The number of rice plantation areas in 2019/20 (thousand hectares)**



Source: The Census on Agriculture in 2019/2020.

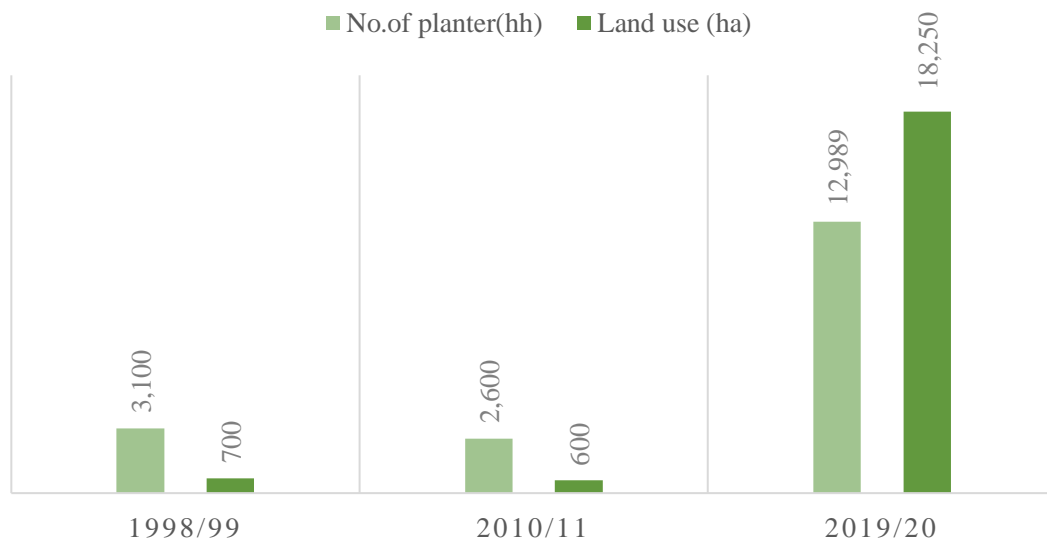
The agricultural households have shifted to plant more variety of crops, especially the industrial crops as illustrated in Figure 9 and 10 that have been shifted over the past 20 years of the household that plant the annual plants, the outstanding sector includes the cassava plantation that has increased 1% of the total households that plant the cassava in 2010/2011 that has increased for 2% in 2019/2020.

**Figure 14: The percentage of the households that plant the industrial crops compared to the total agricultural households in 1998/99 to 2019/2020 (%)**



Source: The Census on Agriculture in 1998/99, 2010/11 and 2019/20

**Figure 15: The number of planters and cassava plantation area in 1998/99 to 2019/2020**

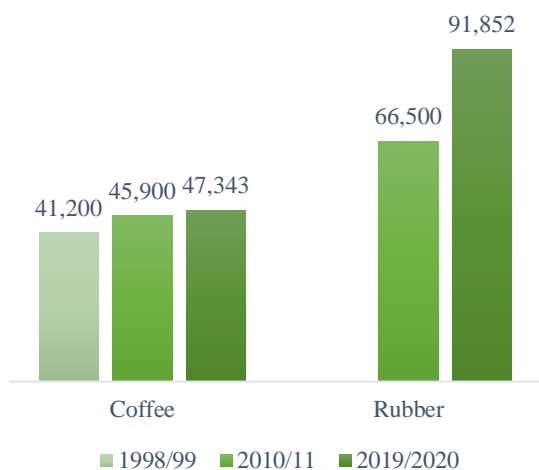


Source: The Census on Agriculture in 1998/99, 2010/11 and 2019/20

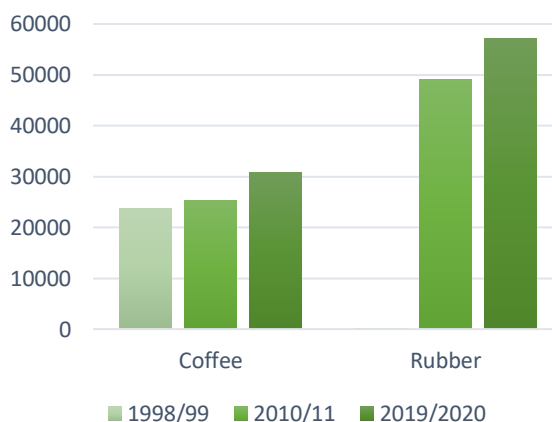
## Permanent Crops

The Permanent crop means the plant that has a lifespan of more than 2 years, these include: coffee, cardamom, tea and other fruit tree. In 2019/2020, it was found that the households plant more variety of annual plantation compared to the previous 20 years. In 2019/20, the household shifted from industrial goods into trade, these include: coffee, cardamom, and rubber plantation. Figure 10 indicates the household that plant coffee and rubber plantation over the past 20 years. The households that plant coffee increased at 3% in 2010/11 to 5% in 2019/2020 and the household that plant rubber increased from 6% in 2010/2011 to 9% in 2019/2020. Figure 11, illustrates the land use of rubber plantation that increased from 66.500 hectares in 2010/11 to 91,853 hectares in 2019/20 (percentage).

**Figure 15: The percentage of the households that plant coffee and rubber in 1998/99 to 2019/20 (Hh)**



**Figure 16: The areas (ha) used in the plantations of coffee and rubber in 1998/99 to 2019/2020**

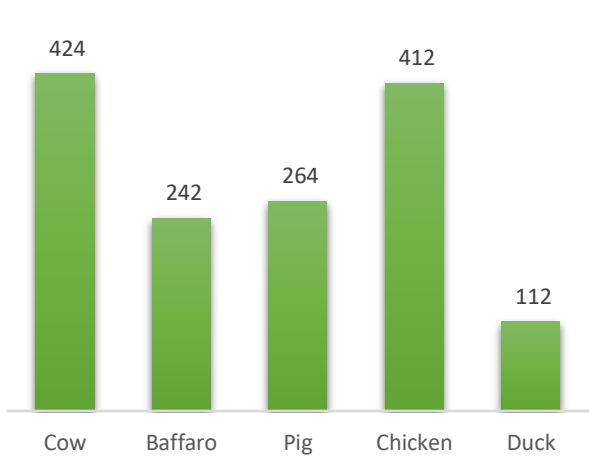


Source: The Census on Agriculture in 1998/99, 2010/11 and 2019/20

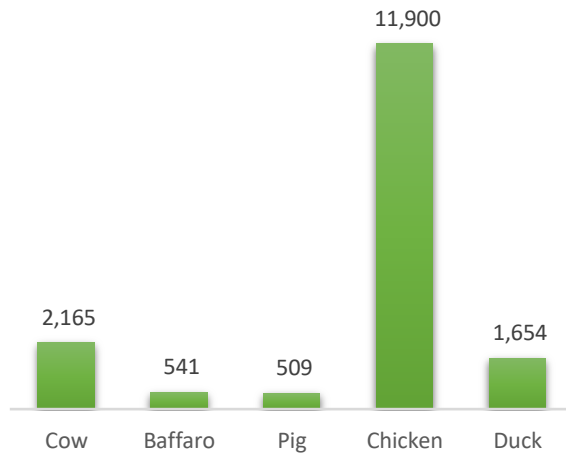
## Livestock

The livestock means all types of animals that are owned by the household, including the temporarily rented animals. The types of livestock include: cow, buffalo, pig, goat, sheep, and poultry at least 1 unit. This census collects the information on the number of households and livestock over the past 12 months. The census results found that the number of households that have the cows and buffalos are increasing, but an average animal per household is experiencing a downward trend, especially on the buffalo and pig. The raising of cow enjoys significant increase from 1,586 households to 2,165 households.

**Figure 17: The number of households with livestock in 1998/99 to 2019/20 (000Hh)**



**Figure 18: The number of livestock in 1998/99 to 2019/20 (000)**

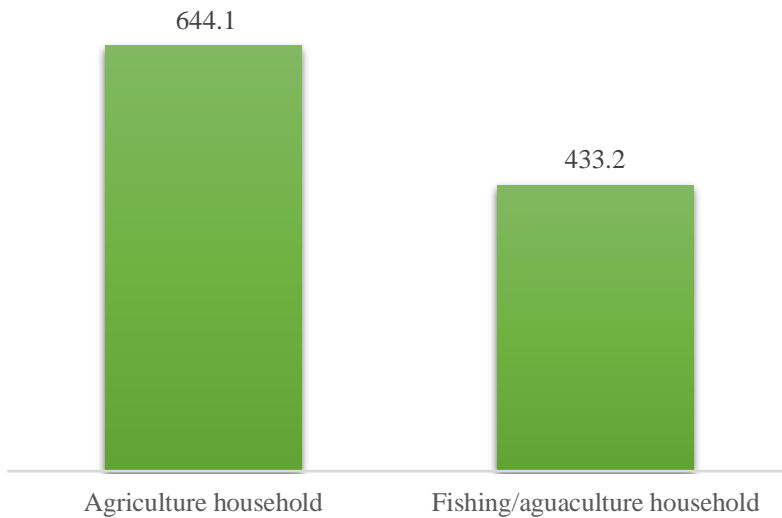


Source of information: The Census on Agriculture in 2019/20

## 2.5 The aquaculture animal and fishery

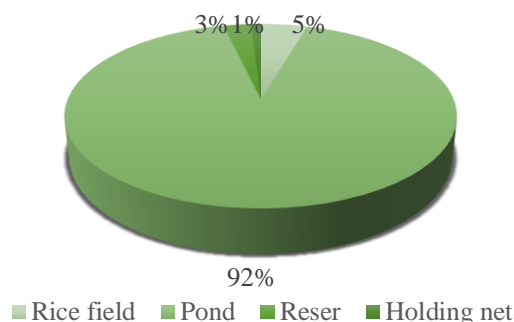
The agricultural household has the activities of fish raising, aquaculture and fishery that are self-owned and not in possession that are accounted as the household that raise an aquatic animal or fishery. In 2019/2020, almost 67% of the agricultural household still rely on the fishery and aquatic animal raising as a profession that generates revenues and sources of food of the household. However, comparing to 2010/11 it was increased 27%.

**Figure 19: The number of households with livestock/fishery in 2010/11 and 2019/20**

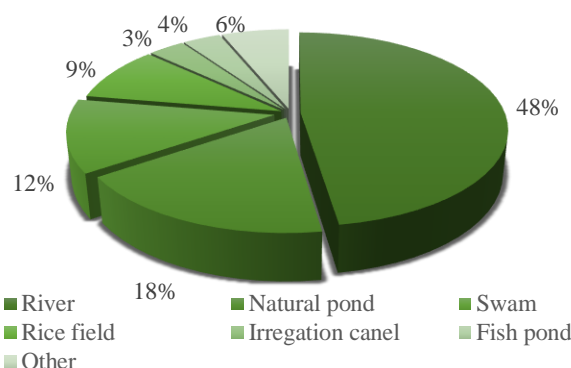


Source: The Census on Agriculture in 2010/11 and 2019/20

**Figure 20: The type of aquaculture in 2019/20**



**Figure 21: The fishing categorized by source**



Source: The Census on Agriculture in 2010/11 and 2019/20

Figure 17 and 18 illustrate the behaviors of aquatic animals raising and fishery of the households that found that in 2019/2020, the agricultural household that raise aquatic animals prefer to raise in the fish pond that account for 92%. Whereas the households that catch the fish account for 48%, followed by the natural pond and swamp that account for 18% and 12% respectively. Despite the fact that in general, the agricultural household that do the fishing and aquatic animals are experiencing a downward trend. It is unable to summarize that the production in this sector is decreasing. Hence, in order to certify the production in the sector for the upcoming analysis, an in-depth analysis is needed regarding the production, yields, and revenue collections in accordance with Volume 2 report.

## 2.6 The agricultural labor

The agricultural households with the family members at least 15 years of age conduct the main profession or back up profession in the agricultural production or assist the household in the agricultural production that is counted as the agricultural labor. In 2019/20, the number of agricultural producers with the age of 15 years or older are 2.4 million people that account for 64% of the total population. The labor that conduct the main or back up profession in the agriculture account for 89% compared to 2010/11 that is a 74% increase and account for 29% that do not receive the wages, but rather a household labor. Whereas, other types of profession account for 3% compared to 2010/2011 that is a 1% increase. This has indicated the trend in the shifting of profession for those at the age of 15 years old or older towards non-agricultural sector.

**Table 4: The components of agricultural labors in Lao PDR in 2019/20.**

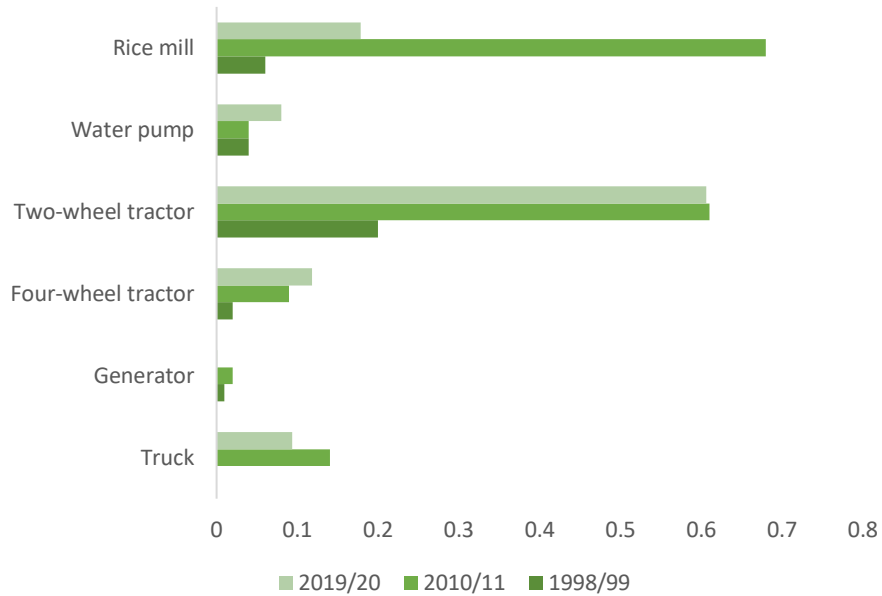
Description	2019/2020 (‘000)	Percentage (%)
The agricultural labor with the age of 15 years or older	2,450	100%
The main and back-up profession in agriculture	2,182	89%
Self-employed in the non-agricultural sector	15	1%
Other types of labor	72	3%
Non-labour type, but assist in the household agricultural production	701	29%

Source of information: The Census on Agriculture in 1998/99, 2010/11 and 2019/20

## 2.7 The factors that are considered in the agricultural production

The area of Dry season rice in general decreased from 57 thousand hectares to 42 thousand hectares, whereas other factors to consider in the agricultural production include modernized tools, especially on the use of 4-wheel tractors that have increased from 09% in 2010/11 to 11.3% and the use of water pumps increased from 4% to 8%.

**Figure 22: The percentage of the agricultural households that use agricultural tools in 1998/99 and 2019/20**



Source: The Census on Agriculture in 2019/20

## Chapter 3: The Village Infrastructure and Services

### 3.1 The village characteristics

The allocation of village in Lao PDR divides into 2 types namely: the urban and rural villages. The rural village is categorized into 2 types including: the rural village with road access and the rural village with no road access depending on the characteristics of each region. The criteria of the village registration of census on agriculture and the national economic survey across the nation in 2019 for the census on agriculture in 2019/2020 is determined by the following criteria:

- The village that resides within the district or provincial municipality;
- Over 70% of the households have access to electricity;
- Over 70% of the households have access to water utility;
- The village that has road access for both seasons;
- The permanent village and there are buying-selling activities throughout the day.

The criteria for the urban village that meets 3 condition or more aforementioned is classified as the urban village, otherwise would be categorized as the rural village.

Whereas, the rural village with road access means the village that meets the criteria less than 3 out of 5 conditions as aforementioned, but there is a road access for big vehicle to access throughout the year or the distance from the major road is less than 100 meters. For the rural village with no road access means the village that does not meet the criteria less than 3 out of 5 conditions as aforementioned and there is no road access to the village.

The number of villages in each province across the country is either increase or decreased from time-to-time due to the fact that the government has merged the small village into major village; there is a resettlement to a new place (caused by the construction of hydropower project); there is an infrastructure development, especially on the road building that is one condition that contributes to decrease in number of rural village with no road access to have a road access or being developed as an urban village.

The registration of census on agriculture across the country has been conducted in 2019 and can be summarized that: in Lao PDR, there are 148 districts; 8,416 villages (1,540 are urban villages and 6,031 are rural villages that account for 71.7%); the rural area with no road access cover 845 village that account for 10%.

**Table 4: The number of villages categorized by the types of village and district in 2019/2020**

Source of information: The Census on Agriculture in 2019/20

Code	Province	District	Rural area with road access	Rural area with no road access	Total
<b>Lao PDR</b>		<b>1,540</b>	<b>6,031</b>	<b>845</b>	<b>8,416</b>
1	Vientiane Capital	318	160	3	481
2	Phongsaly	58	362	95	515
3	Luangnamtha	55	299	0	354
4	Oudomxay	56	299	117	472
5	Bokeo	41	192	16	249
6	Luangprabang	137	534	85	756
7	Huaphanh	36	513	179	728
8	Xayaboury	163	265	4	432
9	Xiengkhuang	58	409	10	477
10	Vientiane Province	122	293	3	418
11	Borikhamxay	70	206	15	291
12	Khammuane	80	460	29	569
13	Savannakhet	147	776	101	1024
14	Saravane	38	489	52	579
15	Sekong	17	144	36	197
16	Champasack	92	453	96	641
17	Attapeu	31	109	4	144
18	Xaysomboun	21	68	0	89

### 3.2 The village infrastructure

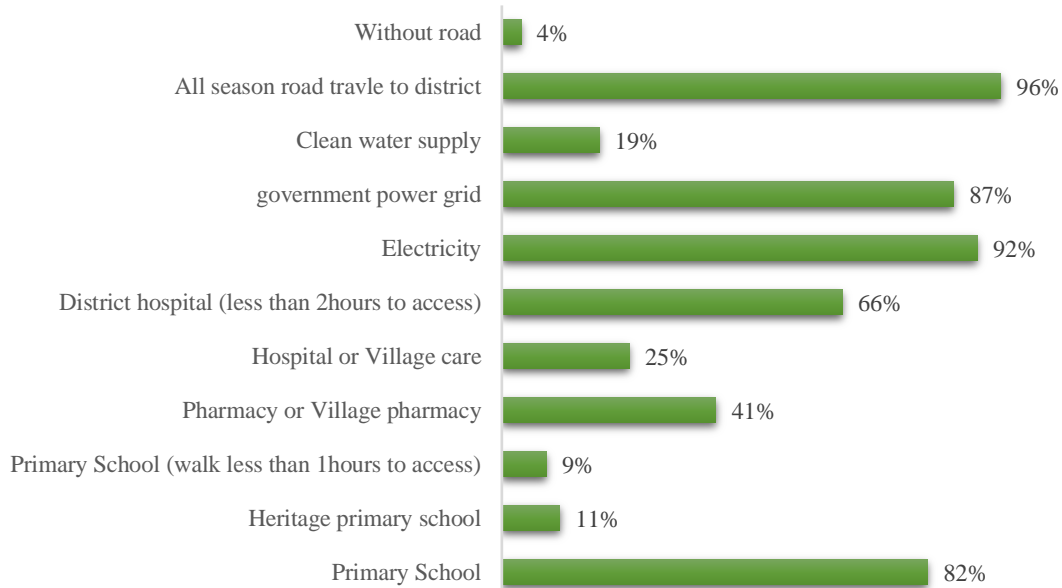
The village infrastructure has been improved and developed during 2019/20, 91.7% of the total villages have access to electricity; 92.6% of the villages have road access throughout the years and 82.1% have primary schools. However, there are some village that are facing difficulty, including: 8.6% of the villages need 1-hour commute time to the primary school and 3.8% still have no road access. 65.7% of the villages need at least 2 hours to commute or walk to the hospital; 24.6% of villages have a village clinic (Figure 16).

Figure 17 illustrates the villages have access to the government power grid that is increasing and account for almost 100%, especially Vientiane Capital; Champassak Province; Vientiane Province; and Xayaboury Province that account for 98.5%; 97.5%; 96.3%; and 96% respectively. Even though there are some villages in provinces still have no access to the power grid, including: Phongsaly Province and Xekong Province that only 60.1% of the total villages and 64% have access to the power grid respectively.

Figure 18 illustrates the use of power grid divided by the area, it is found that the villages in the urban areas use the power grid at 100%, whereas the rural areas with road access account for 92%. 96% and 92% of the plateau and flat areas have access to electricity respectively. There are only some villages in the rural areas that have no road access and the hill areas still have low access to the power grid.

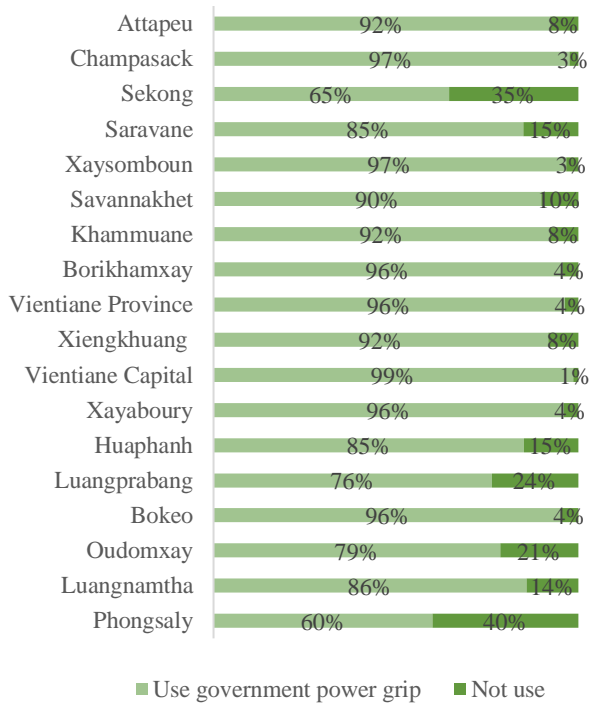


**Figure 23: The village infrastructure in 2019/2020**



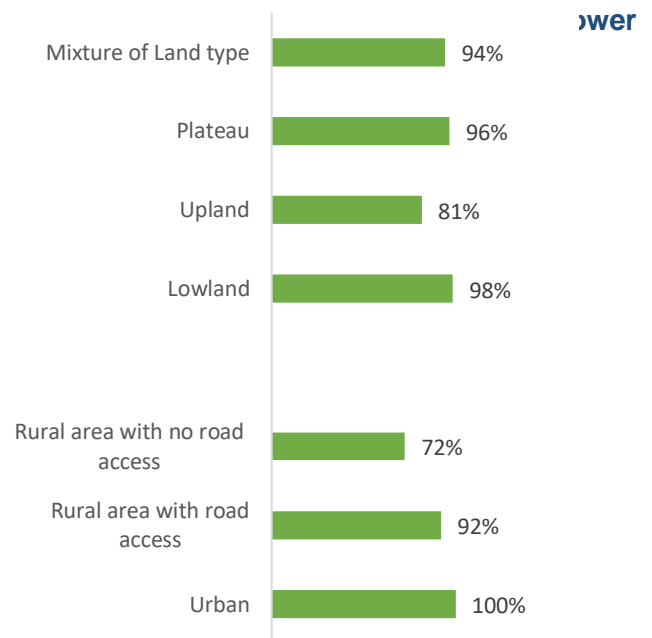
Source: The Census on Agriculture in 2019/2020

**Figure 24: The government power grid in 2019/2020 (Number of village)**



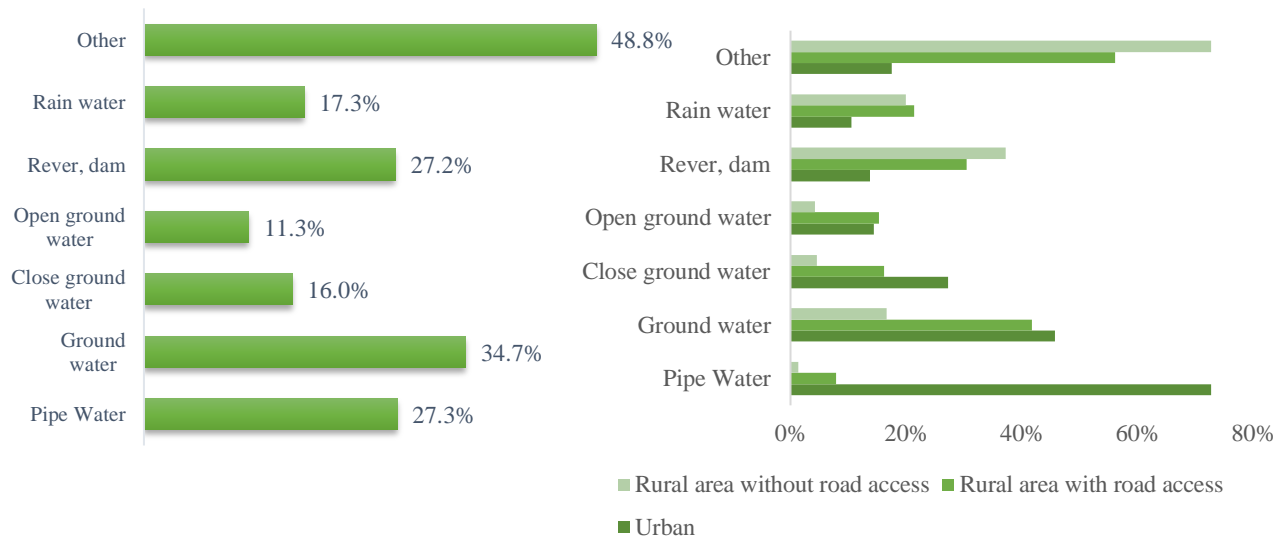
Source: The Census on Agriculture in 2019/2020

**Figure 25: The use of government power grid in 2019/2020**



In 2019/2020 most villages use water utility, underground water in their livelihoods that account for 27.3% and 34.7% respectively. The water utility covers almost 80% of the urban areas, whereas in the rural areas, there are variety of water sources, especially the underground water and the closed well that account for 42% and 16% respectively. The villages with no road access use water from other sources (Figure 19). In terms of the agricultural infrastructure, it is found that 64% of all the households have access to merchandise shops; agricultural product shops; financial institutes and animal treatment facilities. When looking at the topographic, it is found that villages in the flat areas can have access to the agricultural infrastructure fairly well, these include markets, merchandise shops, and production factor shops that account for 31%, 47.4%, and 54.7% respectively. Whereas the flat plateau and hill areas still do not have adequate access to these kind of services (Figure 20).

**Figure 26: The water use categorized by the sources and areas in 2019/20**



Source: The Census on Agriculture in 2019/2020

**Figure 27: The ratio of accessing to agricultural infrastructure (%)**

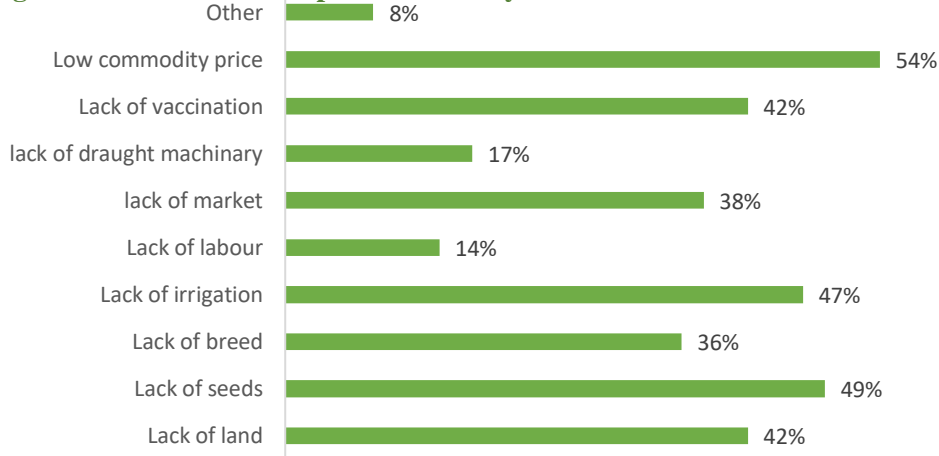


Source: The Census on Agriculture in 2019/20

### 3.3 The obstacles in agricultural productions

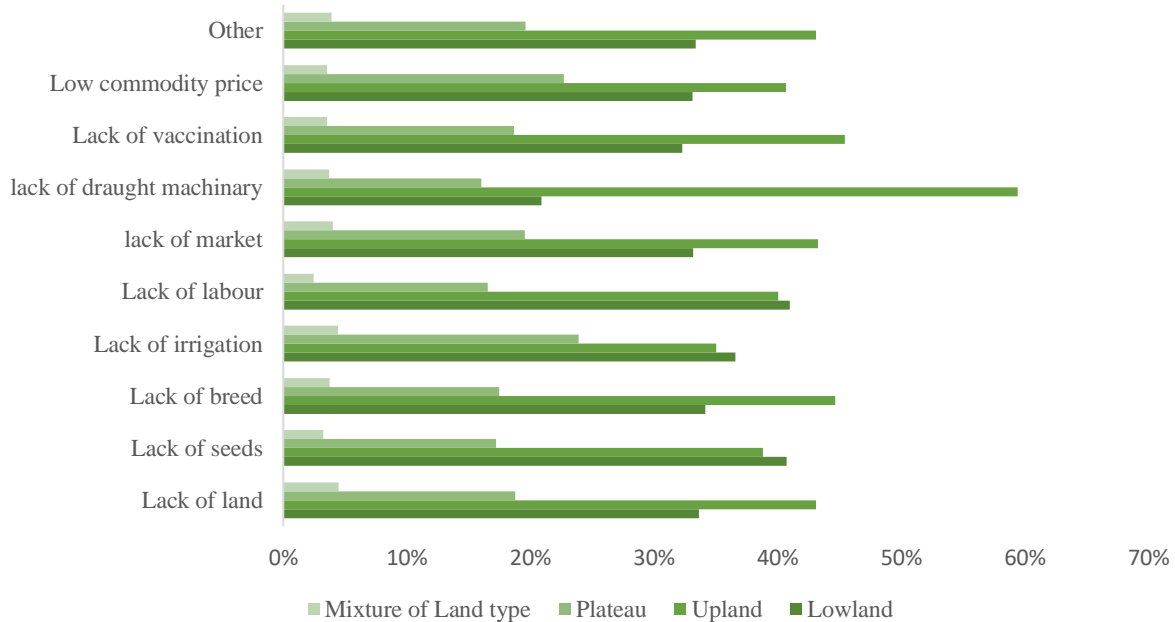
The III Census on Agriculture in 2019/20 has conducted the interviews to find out the issues and obstacles in the agricultural production and found that 54% of all villages replied that the obstacles in the agricultural productions, include: low productivity; 49% of the households replied that they lack of the seeds; 42% said they lack of the seeds due to the lack of pesticides; and 47% of the villages said they do not have adequate irrigation system in place (Figure 21). When looking at the topographic, it is found that majority of the flat areas have the obstacles in terms of the lack of labors and in the hill areas lack of pulling vehicles, and the plateau lacks of irrigation system (Figure 22).

**Figure 28: The constraint/problem face by farmers in 2019/2020**



Source: The Census on Agriculture in 2019/2020

**Figure 29: The unsolved issues on the farmers in 2019/20 categorized by topography**

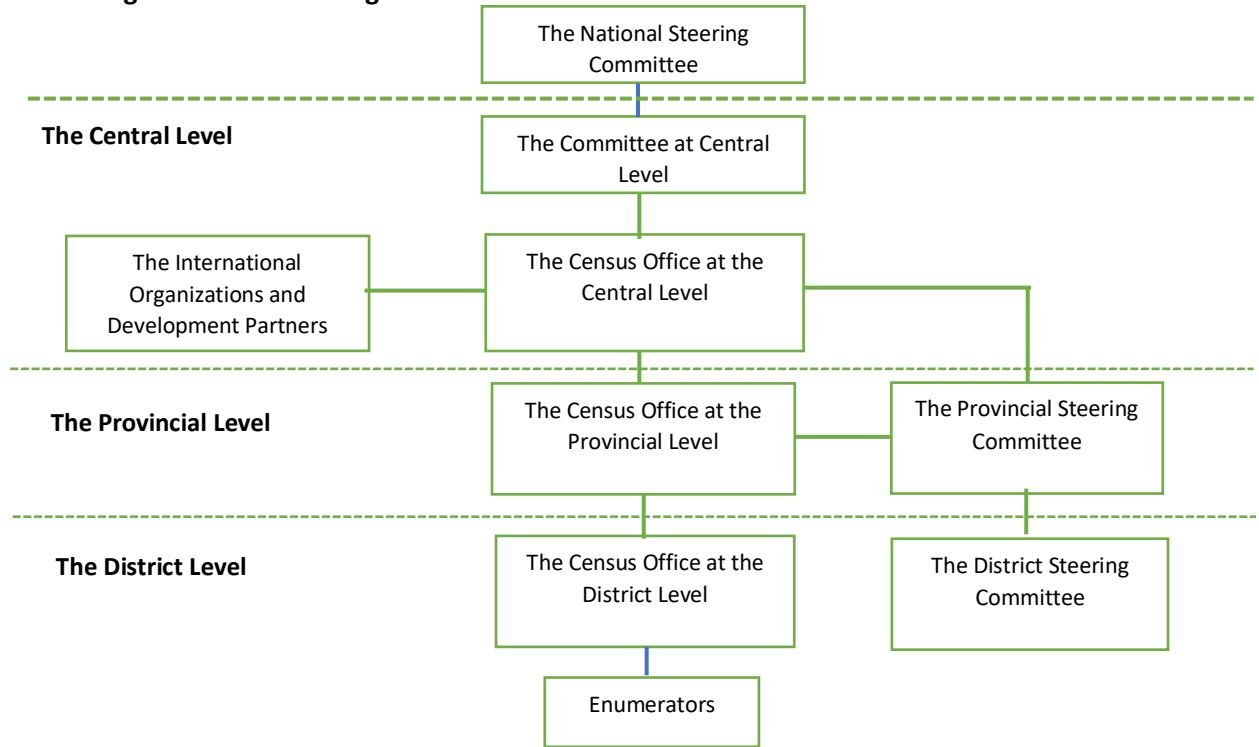


Source: The Census on Agriculture in 2019/20

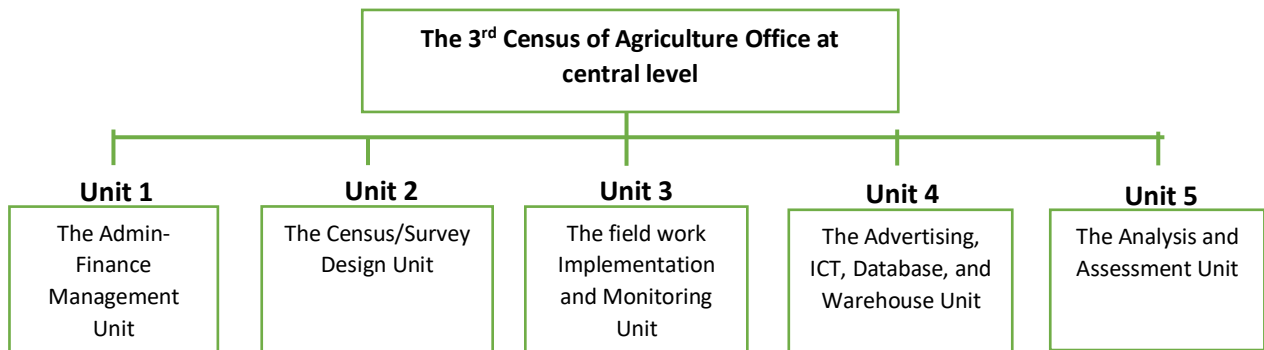
# ANNEXES

# The Organizational Chart of the 3<sup>rd</sup> Lao Census of Agriculture

## The Organizational Steering Committee



## The Organizational Structure of Agriculture Census Office at Central Level



## The National Overseeing Committee of the III Census on Agriculture 2019/20 in 2017/20



Mr. Somdy  
DOUANGODY



Dr. Souphanh  
KEOMIXAY



Dr. Samaichanh  
BOUPHA



Dr. Pouangparisak  
PRAVONGVIEGKHAM



Ms. Thipphakone  
CHANTHAVONGSA

## The Office of the 3rd Census on Agriculture, 2019/20 in 2017-20



Ms. Phetsamone  
SONE



Mr. Xaypradeth  
CHOUNLAMANY



Mr. Vixay  
SANTHIVONG

The National Overseeing Committee on the III Census on Agriculture,  
2019/20 in 2020



Mr. Somdy  
DOUANGODY



Ms. Phonesaly  
SOUKSAVATH



As. Pro Dr.  
Linkham  
DOUANGSAVANH

The Office of the 3rd Census on Agriculture, 2019/20 in 2017-20



Ms. Phetsamone  
SONE



Mr. Somxaïy  
SEXANON



Mr. Vixay  
SANTHIVONG



Mr. Savan  
HANHPHOM

**The National Overseeing Committee on the III Census on Agriculture,  
2019/20 in 2021**



**Mr. Bounchomh  
OUBONPASEUTH**



**Ms. Phonesaly  
SOUKSAVATH**



**Mr. Thongphath  
VONGMANY**

**The Office of the 3rd Census on Agriculture, 2019/2020 in 2020-2021**



**Ms. Phetsamone  
SONE**



**Ms. Sousath  
XAYAKHOUMMANE**



**Mr. Vixay  
SANTHIVONG**

**Census Office Units in 2017-2020**



**Mr. Bounmy  
VILAYCHITH**



**Mr. Khammanh  
CHALERNPHON**



**Ms. Salika  
CHANTHALAVONG**



**Ms. Vivanh  
SOUVANNAMETY**



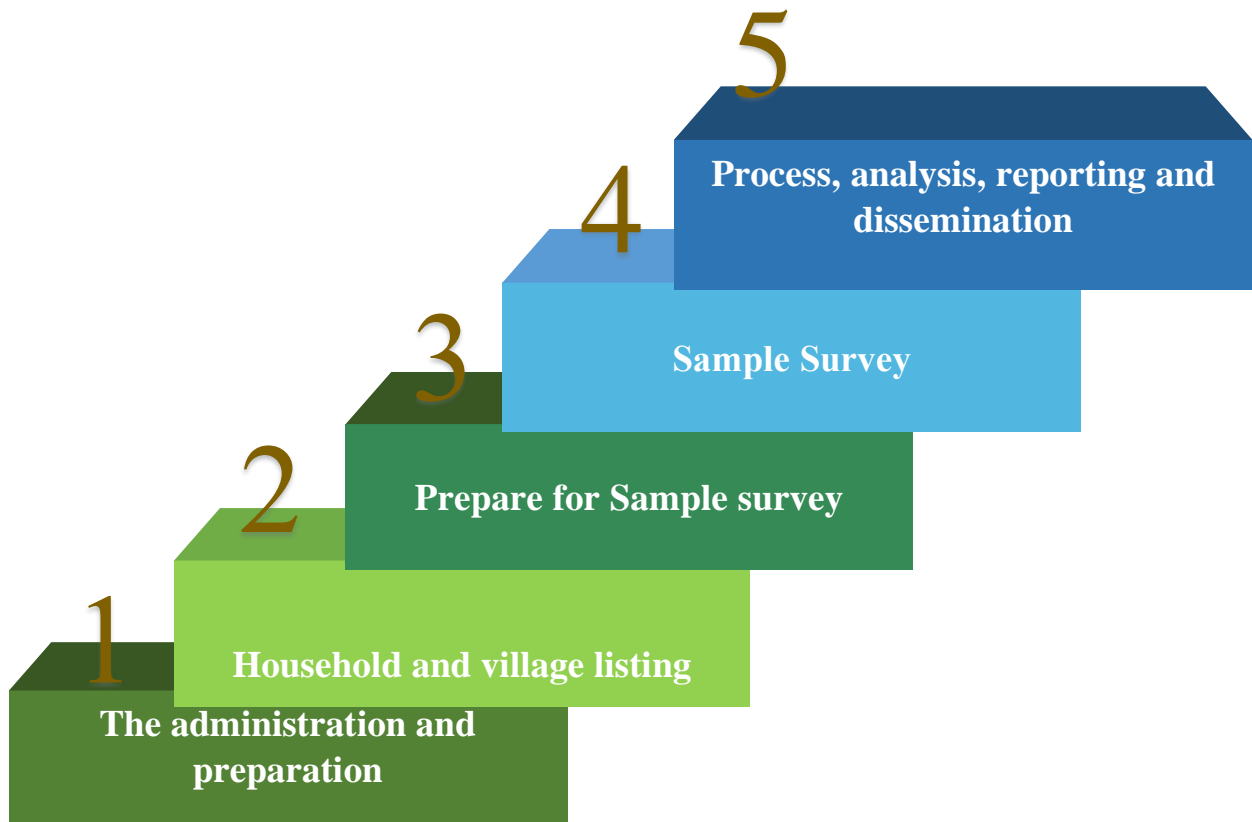
**Ms. Soulipanh  
PHIMPAPHONGSA  
VATH**



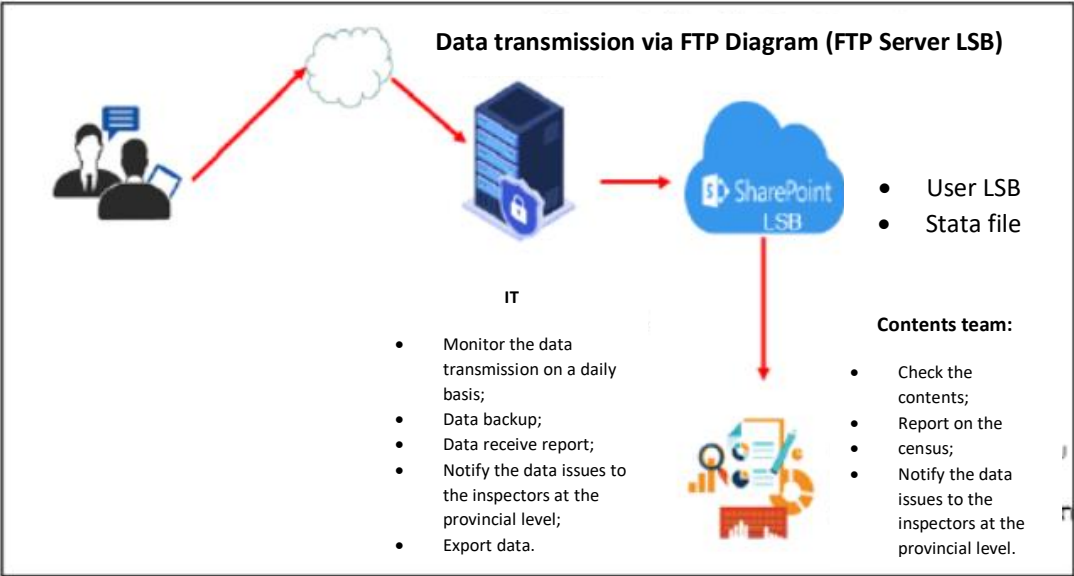
**Mr. Kingphet  
ATSANAVONG**



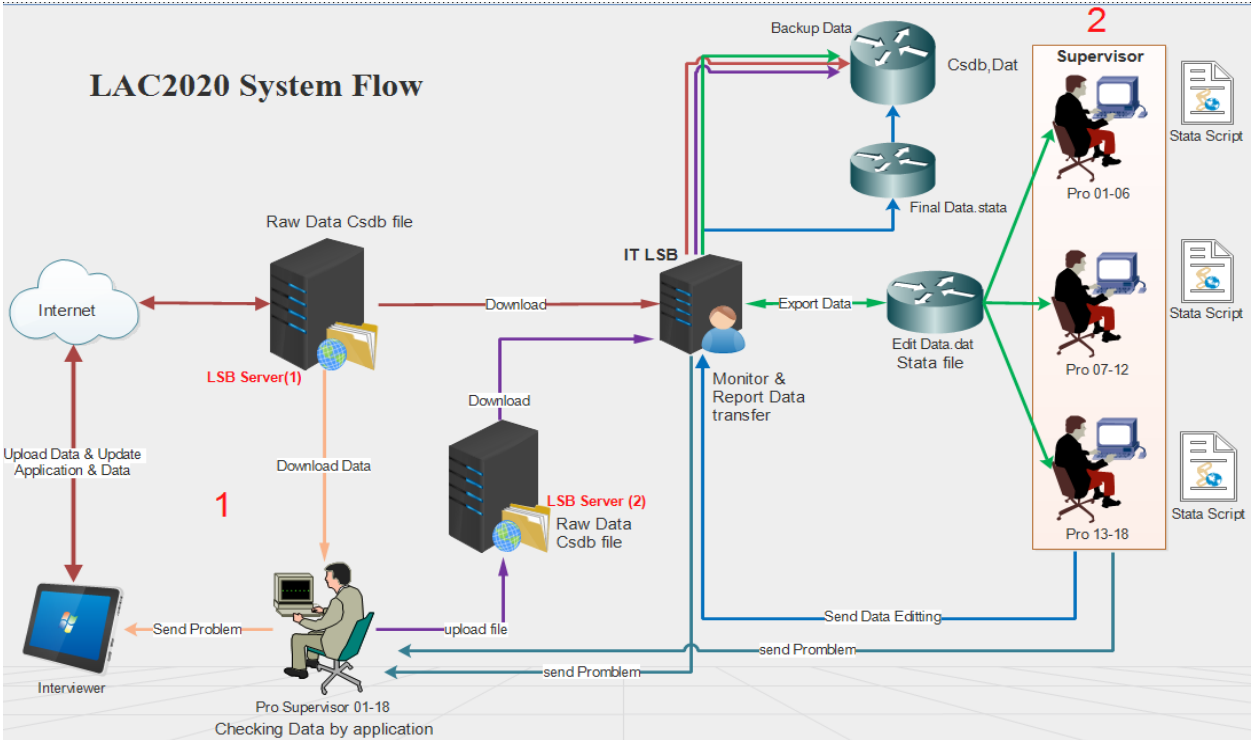
## The Operational Steps of the 3rd Census of Agriculture



# The Database and Information Collection Diagram



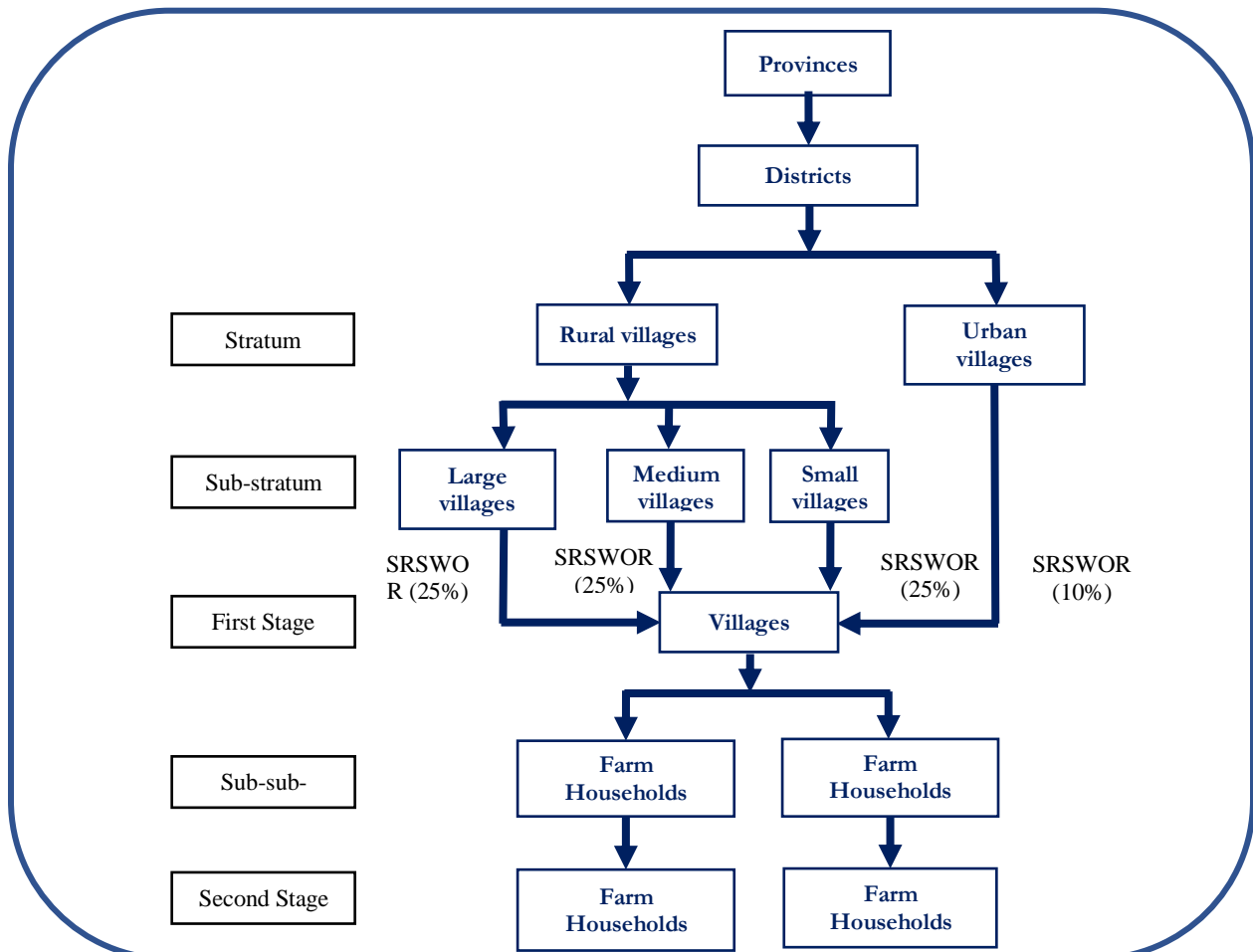
## Data Correction and Processing Diagram



## The Selection of Agent Regime

The selection of the agent comprised of 02 stages, beginning from the use of all accounts (Village Frame) at the 1<sup>st</sup> stage with the total 8,416 villages (8,251 are agricultural households). The villages that are within the conditions of the agent shall be at least 1 agricultural household. The agricultural household means the household that meets 1 in 5 criteria as the following: owns the agricultural land at least 0.5 hectare; 05 or more cattle; 10 or more pigs or goats; 50 poultries or more. The agricultural villages are classified into 04 village group or (Stratum) as: the urban villages; the micro rural villages that have the agricultural land between 1 – 73.0 hectares; the medium rural villages refer to the villages that own the agricultural land between 73.01 – 147.0 hectares; the villages in the major rural areas own the agricultural land 147.01 hectares or more. The selection uses the ‘Simple Random Sampling Without Replacement or SRSWOR Technique’. The 2<sup>nd</sup> stage is the selection of 20 household agents per the agent village in the minor areas by using the same technique of the agent selection. The first 16 households have been selected (ordered by the random size) as the primary households and select the first 4 households in 16 primary households that are the minor agent (when it comes to the interview on the food security and environmental management). Whereas the 4 remaining households are the backup households of the agents.

### The Selection of Agent Diagram



The Design Weight refers to the weight from all accounts within the agent groups divided by the multiplication results among the census units and number of agent villages with the possibility of 1 Stratum of the III Census, the initial design of the agent refers to the 2<sup>nd</sup> stage by using the Possibility (P) for selection. The 1<sup>st</sup> stage refers to the selection of farming village ( $P_{si}$ ) and the 2<sup>nd</sup> stage is the selection of agricultural household ( $P_{sij}$ ).

$$P = P_{si} \cdot P_{sij}$$

The possibility of the selection of the possibility of the (PPS) ratio in the 1<sup>st</sup> stage is

$$p_{si} = \frac{H_S^{listing}}{C_S \cdot h_s^{listing}}$$

$N_c$ : the number of Household per cluster.

Therefore, the possibility of the selection by including the households that have been selected form the sampling scope is referred to:

$$P = \frac{H_S^{listing}}{C_S \cdot h_s^{listing}} \cdot \frac{h_{sp}^{listing}}{n_c} \quad [2]$$

Therefore, the Design weight  $w_s^d$  for the household in stratus s is:

$$w_s^d = \frac{1}{p} = \frac{H_S^{listing}}{16 \cdot c_s} \quad [3]$$

Then, we calculate the ‘First weight’ or ‘Sample weight’ as the following:

$$S_w = w_s^d \cdot c_s$$

Sw: The First Weight or Sample Weight

In case there is no response, it shall be referred to the design multiplied with the survey results for the total agricultural households in the calculation of the number of households that have been registered during the registration and the III Census on agriculture at the field, villages, and households that maybe change from time-to-time depending on the changes of each Stratum that can use the weight of the agent group and capable of calculating the ratio between the household that have been selected within the Stratum layer by referring to the information that has been initially registered. If the information has not been questioned from the head of villages (if any) shall be referred to these two sources.

$$w_s^{hc} = \frac{\sum h_{sp}^{Survey}}{\sum h_{sp}^{listing}}$$

In principle, this ratio means the changes made to the number of households, but the scope of average of households do not change between the registration and the III Census on Agriculture.

The ratio of the response is calculated as the following:

$$w_s^{nr} = \frac{n_c/n_s^r \cdot c_s}{n_s^r}$$

$n_s^r$  refers to the number of households that respond in Stratum s, that is gained from the III Census on Agriculture.

$$n_c/n_s^r$$

refers to the number of agent households that are range between 6-16.

The overall result of the weight equals the design weight multiplied by the changes and weight of the non-responding:

$$w_s = w_s^d \cdot w_s^{hc} \cdot w_s^{nr} = \frac{H_s^{listing}}{16 \cdot c_s} \cdot \frac{\sum h_{sp}^{survey}}{\sum h_{sp}^{listing}} \cdot \frac{n_c/n_s^r \cdot c_s}{n_s^r} = \frac{H_s^{listing} \cdot \sum h_{sp}^{survey}}{\sum h_{sp}^{listing} \cdot n_s^r} \quad (1^{st} \text{ method})$$

$$w_s = w_s^d \cdot S_w \cdot w_s^{hc} \quad (2^{nd} \text{ method})$$

## The Annex of Agricultural Household Information

**Table 1: The Agricultural households and non-agricultural household ('000) divided by the province in 1998/99 and 2010/11 and 2019/20**

Province	Number of housheold			Agriculture household			Non-Agriculture household		
	1998/99	2010/11	2019/20	1998/99	2010/11	2019/20	1998/99	2010/10	2019/20
<b>North</b>	<b>256.6</b>	<b>323.0</b>	<b>370.9</b>	<b>238.4</b>	<b>288.9</b>	<b>236.7</b>	<b>18.2</b>	<b>34.0</b>	<b>134.2</b>
Phongsaly	25.6	29.5	33.6	24.4	28.4	20.6	1.2	1.1	12.9
Luangnamtha	21.4	29.2	35.3	19.8	26.2	24.1	1.7	3.0	11.2
Oudomxay	35.8	48.3	60.7	33.4	44.6	39.1	2.5	3.7	21.5
Bokeo	20.8	28.5	32.9	18.8	24.8	19.0	2.0	3.7	13.9
Luangprabang	62.0	73.2	84.6	55.7	59.5	50.5	6.3	13.7	34.1
Huaphanh	38.5	45.7	48.8	36.9	42.3	30.8	1.6	3.4	18.0
Xayaboury	52.3	68.5	75.1	49.4	63.1	52.5	2.9	5.4	22.5
<b>Center</b>	<b>371.7</b>	<b>499.7</b>	<b>615.0</b>	<b>285.9</b>	<b>336.4</b>	<b>274.4</b>	<b>85.8</b>	<b>163.3</b>	<b>340.6</b>
Vientiane Capital	97.0	132.3	184.2	48.6	42.8	20.4	48.4	89.5	163.8
Xiengkhuang	30.9	40.4	43.5	28.1	36.2	24.3	2.8	4.2	19.2
Vientiane Province	50.2	81.2	77.3	43.7	62.7	41.5	6.5	18.5	35.8
Borikhamxay	29.6	43.3	54.0	26.5	35.0	30.0	3.0	8.3	24.1
Khammuane	52.4	65.1	71.3	43.6	51.1	38.9	8.8	14.0	32.4
Savannakhet	111.8	137.3	169.3	95.4	108.6	110.9	16.3	28.7	58.3
Xaysomboun			15.4			8.5			6.9
<b>South</b>	<b>161.7</b>	<b>198.8</b>	<b>255.5</b>	<b>136.0</b>	<b>157.5</b>	<b>133.0</b>	<b>25.7</b>	<b>41.3</b>	<b>122.5</b>
Saravane	45.4	55.4	71.4	41.3	50.1	44.5	4.1	5.3	27.0
Sekong	10.5	15.0	21.8	9.7	12.9	14.3	0.8	2.1	7.5
Champasack	89.4	105.7	131.1	70.2	75.4	58.3	19.2	30.2	72.8
Attapeu	16.4	22.7	31.2	14.8	19.1	16.0	1.6	3.6	15.2
<b>Total</b>	<b>798.0</b>	<b>1,021.4</b>	<b>1,241.4</b>	<b>668.0</b>	<b>782.8</b>	<b>644.1</b>	<b>130.0</b>	<b>238.6</b>	<b>597.3</b>

**Table 2: The Agricultural households and non-agricultural household ('000) divided by the types of village and province in 2019/20**

Province	Number of total households			Number of agricultural households		
	Total	Agricultural household	Non-Agricultural household	Urban	Rural area with road access	Rural area with no road access
<b><i>Northern part</i></b>	<b><i>370.9</i></b>	<b><i>236.7</i></b>	<b><i>134.2</i></b>	<b><i>51</i></b>	<b><i>173.6</i></b>	<b><i>36.3</i></b>
Phongsaly	33.6	20.6	12.9	3.9	14	2.8
Luangnamtha	35.3	24.1	11.2	5	17.7	1.4
Oudomxay	60.7	39.1	21.5	4.5	25.4	9.2
Bokeo	32.9	19	13.9	0.6	16.4	1.9
Luangprabang	84.6	50.5	34.1	11.8	31.9	6.8
Huaphanh	48.8	30.8	18	2.5	15.7	12.6
Xayaboury	75.1	52.5	22.5	19.2	32.8	0.5
<b><i>Central Part</i></b>	<b><i>615</i></b>	<b><i>274.4</i></b>	<b><i>340.6</i></b>	<b><i>3.5</i></b>	<b><i>19.9</i></b>	<b><i>0.9</i></b>
Vientiane Capital	184.2	20.4	163.8	35.4	203.2	11.5
Xiengkhuang	43.5	24.3	19.2	4.6	15.8	-
Vientiane Province	77.3	41.5	35.8	6.3	35.2	-
Borikhamxay	54	30	24.1	4.9	24.5	0.6
Khammuane	71.3	38.9	32.4	4.2	32.7	1.9
Savannakhet	169.3	110.9	58.3	13.6	88.7	8.6
Xaysomboun	15.4	8.5	6.9	1.9	6.3	0.3
<b><i>Southern Part</i></b>	<b><i>255.5</i></b>	<b><i>133</i></b>	<b><i>122.5</i></b>	<b><i>16.7</i></b>	<b><i>102.1</i></b>	<b><i>14.2</i></b>
Saravane	71.4	44.5	27	2.5	40.3	1.6
Sekong	21.8	14.3	7.5	2.7	10.4	1.2
Champasack	131.1	58.3	72.8	6.9	41.4	9.9
Attapeu	31.2	16	15.2	4.6	9.9	1.5
<b>Total</b>	<b><i>1,241.40</i></b>	<b><i>644.1</i></b>	<b><i>597.3</i></b>	<b><i>103.1</i></b>	<b><i>478.9</i></b>	<b><i>62.1</i></b>



**Table 3: The Agricultural households divided by the gender of the head of household; size of household; primary profession of the head of household, and province in 2019/20 (Unit: 1000)**

Province	Chief of household		Household members			Primary profession of the head of household			
	Male	Female	Less than5	5 People	More than 5	Employee	Employer	Self-employed	Others
<b>Northern part</b>	<b>223.2</b>	<b>13.3</b>	<b>99.6</b>	<b>48.7</b>	<b>88.2</b>	<b>23.7</b>	<b>1.2</b>	<b>163.9</b>	<b>47.7</b>
Phongsaly	19.2	1.4	8.7	4.4	7.6	2.7	0	14.7	3.3
Luangnamtha	22.9	1.2	8.5	5.6	10	1.8	0.1	20.2	2.1
Oudomxay	36.9	2.2	15.9	8.1	15.1	3.8	0.1	24.9	10.3
Bokeo	17.1	1.8	7.4	3.5	8	1.1	0.2	13.6	3.9
Luangprabang	47.7	2.8	20.2	10.7	19.6	5.3	0.1	36	9.1
Huaphanh	30	0.8	11.2	6	13.6	2.8	0.3	22.2	5.5
Xayaboury	49.4	3.1	27.7	10.5	14.3	6.3	0.4	32.4	13.5
<b>Central Part</b>	<b>235.9</b>	<b>38.2</b>	<b>98.3</b>	<b>55</b>	<b>120.7</b>	<b>21.7</b>	<b>1</b>	<b>175.5</b>	<b>75.9</b>
Vientiane Capital	17.2	3.1	10.3	4.1	5.9	2.4	0.1	14.2	3.5
Xiengkhuang	23.1	1.1	8.3	5	10.9	2.3	0.1	10.1	11.8
Vientiane Province	37.6	3.8	17.1	8.1	16.2	4.1	0.2	24.1	13.1
Borikhamxay	27.2	2.8	12.2	7.1	10.7	2.5	0.1	14.4	12.9
Khammuane	32	6.7	15.8	8.3	14.6	2.7	0.3	30	5.7
Savannakhet	90.4	20.5	32.2	20.7	58	6.3	0.1	78.3	26.2
Xaysomboun	8.3	0.2	2.4	1.7	4.4	1.4	0.1	4.3	2.7
<b>Southern Part</b>	<b>117.1</b>	<b>15.6</b>	<b>46.4</b>	<b>27.1</b>	<b>59.2</b>	<b>10.6</b>	<b>0.5</b>	<b>88.1</b>	<b>33.5</b>
Saravane	38	6.5	15.3	8.5	20.7	3.2	0	32.5	8.8
Sekong	13	1.2	3.5	3.1	7.7	1.9	0.1	10	2.2
Champasack	51.2	6.8	22.1	12.7	23.2	3.8	0.2	35.3	18.7
Attapeu	14.9	1.1	5.5	2.9	7.6	1.8	0.2	10.3	3.8
<b>Total</b>	<b>576.1</b>	<b>67.2</b>	<b>244.4</b>	<b>130.8</b>	<b>268.1</b>	<b>56.1</b>	<b>2.7</b>	<b>427.5</b>	<b>157.1</b>

**Table 4: The average size of land ownership and the percentage of self-owning land divided by the province in 2010/11 and 2019/20**

Province	No. of household (000')		No. of household that owns land (000')		The average size of land ownership (ha)		The average size of land per owner		The average size of land (ha)		% of self-owned land		% of leased land own	
	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20
<b>Northern part</b>	<b>288.9</b>	<b>236.7</b>	<b>287.6</b>	<b>235.9</b>	<b>2.3</b>	<b>2.6</b>	<b>3.1</b>	<b>2.6</b>	<b>0.7</b>	<b>1</b>	<b>94.2</b>	<b>88.9</b>	<b>8.3</b>	<b>1.9</b>
Phongsaly	28.4	20.6	28.4	20.6	1.6	2.2	3.8	3	0.4	0.7	97.9	96.9	4.9	1
Luangnamtha	26.2	24.1	26.2	24	2.2	2.9	2.8	2.7	0.8	1.1	95.8	89.7	8	3.5
Oudomxay	44.6	39.1	44.5	39.1	2.4	2.8	3.3	3.1	0.7	0.9	93.9	86.7	11.7	3
Bokeo	24.8	19	24.7	18.8	2.1	2.3	2.7	2.1	0.8	1.1	92.7	88.6	9.7	2.4
Luangprabang	59.5	50.5	59.3	50.3	2.8	3.4	3	2.6	0.9	1.3	93.3	96.2	9.1	1.9
Huaphanh	42.3	30.8	42.1	30.5	1.3	1.2	2.8	2.1	0.5	0.6	88.4	67	10.7	0.2
Xayaboury	63.1	52.5	62.5	52.5	2.8	3.2	3.5	2.6	0.8	1.2	97.1	97	4.6	1.4
<b>Central Part</b>	<b>336.4</b>	<b>274.4</b>	<b>333.2</b>	<b>273.3</b>	<b>2.6</b>	<b>3.3</b>	<b>2.5</b>	<b>2.1</b>	<b>1.1</b>	<b>1.6</b>	<b>93.5</b>	<b>89.5</b>	<b>9.7</b>	<b>3.7</b>
Vientiane Capital	42.8	20.4	40.7	19.8	2.4	2.2	1.5	1.6	1.6	1.3	80.3	82.3	24.1	14.7
Xiengkhuang	36.2	24.3	36.2	24.2	2	3	3.1	2.6	0.7	1.3	90.9	93.1	10.8	1.7
Vientiane Province	62.7	41.5	62.6	41.3	2.6	3.2	3	2.3	0.9	1.4	96.8	90.9	10.9	4.6
Borikhamxay	35	30	34.5	30	2.2	3.2	2.3	2.2	1	1.5	92.8	88.5	9.3	2.2
Khammuane	51.1	38.9	50.8	38.7	2.3	2	2.3	1.6	1	1.3	93.3	94.1	8.9	1.4
Savannakhet	108.6	110.9	108.4	110.9	3.1	2.6	2.4	1.6	1.3	1.7	97.6	94.2	3.8	1.1
Xaysomboun		8.5		8.5		7		2.6		2.5		83		0.3
<b>Southern Part</b>	<b>157.5</b>	<b>133</b>	<b>155.8</b>	<b>132.6</b>	<b>2.3</b>	<b>2.6</b>	<b>2.4</b>	<b>2.1</b>	<b>1</b>	<b>1.3</b>	<b>95.3</b>	<b>90.6</b>	<b>8.3</b>	<b>3.1</b>
Saravane	50.1	44.5	50	44.4	2.6	2.8	2.9	2.1	0.9	1.5	96.6	93.2	7.2	5.3
Sekong	12.9	14.3	12.7	14.2	2.4	2.2	1.9	2.5	1.3	0.9	91.3	85.2	7.9	1.2
Champasack	75.4	58.3	74.2	58	2.1	2.7	2.1	1.8	1	1.6	95.3	93.4	9.3	4.4
Attapeu	19.1	16	18.9	15.9	1.9	2.7	2.2	2.2	0.9	1.2	94.2	90.6	7.9	1.5
<b>Total</b>	<b>782.8</b>	<b>644.1</b>	<b>776.7</b>	<b>641.8</b>	<b>2.4</b>	<b>2.8</b>	<b>2.7</b>	<b>2.2</b>	<b>0.9</b>	<b>1.3</b>	<b>94.1</b>	<b>91.1</b>	<b>8.9</b>	<b>2.6</b>

**Table 5: Summary of the land information divided by the province in 1998/99, 2010/11 and 2019/20**

Type of village/Type of land	No. agricultural household (000')	Size of ownership							
		Total	No land	0.01-0.49 Hectare	0.50-0.99 Hectare	1.00-1.49 Hectare	1.50-1.99 Hectare	2.00-2.99 Hectare	More than 3 Hectares
Urban	103.1	100.7	2.4	11.6	15.6	19.6	10.5	17.8	25.7
Rural area with road access	478.9	475.7	3.3	30.5	57.4	86.6	51.3	89.8	160.1
Rural area with no road access	62.1	61.9	0.2	4.5	10.3	12.3	6.7	9.7	18.3
Total	<b>644.1</b>	<b>638.3</b>	<b>5.8</b>	<b>46.6</b>	<b>83.3</b>	<b>118.5</b>	<b>68.5</b>	<b>117.3</b>	<b>204.1</b>

**Table 6: The average size of livestock ownership divided by types and province in 2010/11 and 2019/20**

Province	Average no. of livestock / poultries													
	Cow		Buffalo		Pig		Goat		Domestic chicken		Broiler		Duck	
	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20	2010/11	2019/20
<b>Northern part</b>	<b>4.52</b>	<b>3.2</b>	<b>3.19</b>	<b>0.9</b>	<b>3.31</b>	<b>1.3</b>	<b>4.29</b>	<b>0.6</b>	<b>18.32</b>	<b>30.7</b>	<b>66.2</b>	<b>400.4</b>	<b>7.8</b>	<b>14.4</b>
Phongsaly	2.71	0.8	2.27	0.7	2.99	1.1	3.18	0.2	11.65	22.4	13.38	8.6	5.74	12.6
Luangnamtha	3.26	1.5	2.3	0.6	2.97	0.8	4.14	0.6	13.33	25.4	27.29	722.1	5.67	14.4
Oudomxay	3.33	1.8	2.41	0.4	2.73	1.1	3.4	0.9	15.76	25.6	54.56	49.1	6.13	11.1
Bokeo	4.88	4.4	3.36	0.9	3.39	1.4	3.94	0.8	17.89	29.6	31.89	28.6	7.65	12.5
Luangprabang	4.24	4	3.49	1.1	4.2	2	4.83	0.9	22.25	35.7	182.87	1,568.80	8.52	17.9
Huaphanh	4.54	3.9	3.45	1.2	3.42	1.8	4.8	0.4	17.43	32.4	21.6	25	5.56	13.5
Xayaboury	5.95	6.1	4.09	1.4	3.3	1.1	4.23	0.2	23.52	43.9	134.52	-	10.47	19.1
<b>Central Part</b>	<b>5.69</b>	<b>5.3</b>	<b>3.72</b>	<b>1.1</b>	<b>3.58</b>	<b>1</b>	<b>5.77</b>	<b>0.7</b>	<b>18.67</b>	<b>29.5</b>	<b>309.75</b>	<b>259.4</b>	<b>9.39</b>	<b>15.8</b>
Vientiane Capital	7.24	4.8	5.43	1.1	30.05	2.3	9.11	0.9	31.9	37.2	1,449.51	1,003.90	21.04	20
Xiengkhuang	6.02	6.8	3.56	1.1	3.06	1.2	4.58	0.3	22.11	35.7	36.59	-	8.22	16.1
Vientiane Province	6.65	4.8	5.03	1	4.26	1	5.88	0.3	20.77	33.1	175.09	20.5	9.98	19.8
Borikhamxay	6.46	4.4	4.82	1.4	4.57	0.8	7.17	0.7	19.46	31.8	31.84	-	9.96	14
Khammuane	4.47	3.6	3.64	1.2	3.36	0.6	4.97	1.1	11.27	20	66.15	10	6.16	16.4
Savannakhet	5.05	4.9	3.18	1	2.43	0.6	5.55	1.6	15.07	23.1	17.83	3.4	6.72	12.5
Xaysomboun		7.6		1.1		0.8		0.3		25.4		-		11.8
<b>Southern Part</b>	<b>5.45</b>	<b>3.3</b>	<b>3.21</b>	<b>1.2</b>	<b>2.12</b>	<b>0.7</b>	<b>4.35</b>	<b>0.5</b>	<b>14.71</b>	<b>24.2</b>	<b>12.25</b>	<b>8.8</b>	<b>7.29</b>	<b>12.9</b>
Saravane	4.53	3.8	2.93	0.8	1.95	0.8	3.79	0.8	12.06	19.5	9.48	4.5	5.34	10.5
Sekong	3.65	1.9	3.06	0.9	2.56	0.9	3.48	0.2	10.95	19.6	6.85	-	5.79	12.7
Champasack	6.31	4.7	3.17	1	2.14	0.4	6.16	0.5	16.26	36.9	13.88	12	8.55	15.3
Attapeu	8.21	2.6	4	2.2	2.21	0.6	6.05	0.6	18.39	20.8	16.5	10	7.18	13.3
<b>Total</b>	<b>5.34</b>	<b>4.2</b>	<b>3.42</b>	<b>1</b>	<b>3.19</b>	<b>1</b>	<b>4.99</b>	<b>0.8</b>	<b>17.77</b>	<b>28.9</b>	<b>161.85</b>	<b>574.5</b>	<b>8.42</b>	<b>14.7</b>

**Table 7: The agricultural household that raises cows categorized by the objectives and provinces in 2010/11 and 2019/20**

Province	The number of agriculture household that raise cows ('000)	Percentage categorized by the objectives				
		Milk	For selling	For pushing / pulling	Male / female breeding stock	For meat
<b>North</b>	<b>88.1</b>	<b>0.2%</b>	<b>52.3%</b>	<b>0.1%</b>	<b>25.4%</b>	<b>21.9%</b>
Phongsaly	2.4	0.2%	41.3%	0.5%	34.9%	23.2%
Luangnamtha	6.2	0.2%	40.7%	0.1%	26.5%	32.6%
Oudomxay	12.1	0.0%	42.6%	0.1%	30.3%	27.0%
Bokeo	10	0.3%	53.2%	0.2%	23.8%	22.5%
Luangprabang	20.5	0.1%	53.5%	0.1%	26.9%	19.4%
Huaphanh	15.7	0.5%	51.8%	0.1%	28.1%	19.5%
Xayaboury	21.3	0.2%	65.3%	0.2%	16.0%	18.3%
<b>Center</b>	<b>157.9</b>	<b>0.2%</b>	<b>46.4%</b>	<b>1.2%</b>	<b>30.3%</b>	<b>21.9%</b>
Vientiane Capital	6.4	0.0%	59.4%	0.0%	30.9%	9.7%
Xiengkhuang	18	0.1%	42.2%	1.4%	31.8%	24.5%
Vientiane Province	18.3	0.0%	63.8%	0.2%	22.2%	13.8%
Borikhamxay	13.8	0.1%	42.1%	0.0%	28.2%	29.5%
Khammuane	21.4	0.0%	49.3%	0.1%	27.8%	22.9%
Savannakhet	73.3	0.3%	45.9%	1.4%	32.0%	20.4%
Xaysomboun	6.6	0.0%	30.8%	5.0%	33.4%	30.8%
<b>South</b>	<b>51.3</b>	<b>0.1%</b>	<b>50.0%</b>	<b>0.4%</b>	<b>28.3%</b>	<b>21.2%</b>
Saravane	23.9	0.1%	57.9%	0.1%	24.9%	16.9%
Sekong	4.2	0.0%	38.5%	0.1%	27.1%	34.4%
Champasack	19.8	0.1%	46.8%	0.7%	30.7%	21.7%
Attapeu	3.4	0.0%	42.3%	0.2%	32.3%	25.3%
<b>Total</b>	<b>297.4</b>	<b>0.2%</b>	<b>48.6%</b>	<b>0.8%</b>	<b>28.6%</b>	<b>21.8%</b>

**Table 8: The households that raise the buffalos categorized by the objectives and province in 2010/11 and 2019/20**

Province	The number of agriculture household that raise buffalos ('000)	Percentage categorized by the objectives				
		Milk	For selling	For pushing / pulling	Male / female breeding stock	For meat
<b>North</b>	<b>37.8</b>	<b>0.2%</b>	<b>51.6%</b>	<b>0.8%</b>	<b>28.2%</b>	<b>19.2%</b>
Phongsaly	3	0.2%	38.6%	4.6%	32.3%	24.2%
Luangnamtha	3.3	0.3%	39.4%	0.1%	30.4%	29.8%
Oudomxay	4.2	0.0%	45.6%	0.3%	28.2%	25.9%
Bokeo	3.5	0.6%	53.2%	0.0%	25.3%	20.9%
Luangprabang	9	0.0%	50.5%	0.6%	30.0%	18.9%
Huaphanh	7	0.4%	51.1%	0.8%	30.4%	17.3%
Xayaboury	7.9	0.0%	74.8%	0.2%	20.4%	4.7%
<b>Center</b>	<b>51.8</b>	<b>0.3%</b>	<b>45.5%</b>	<b>3.1%</b>	<b>30.9%</b>	<b>20.3%</b>
Vientiane Capital	1.7	0.0%	67.8%	0.0%	24.6%	7.6%
Xiengkhuang	5	0.4%	46.0%	0.9%	29.8%	22.9%
Vientiane Province	5.1	0.7%	66.9%	0.0%	24.3%	8.1%
Borikhamxay	5.3	0.1%	44.4%	0.1%	29.2%	26.1%
Khammuane	8.7	0.3%	46.7%	0.1%	31.7%	21.1%
Savannakhet	24.5	0.2%	41.8%	5.8%	32.4%	19.8%
Xaysomboun	1.5	0.0%	37.3%	0.9%	32.0%	29.8%
<b>South</b>	<b>25.6</b>	<b>0.0%</b>	<b>47.8%</b>	<b>2.8%</b>	<b>30.8%</b>	<b>18.6%</b>
Saravane	8.7	0.0%	54.8%	0.7%	26.4%	18.1%
Sekong	2.7	0.0%	32.4%	11.3%	27.1%	29.2%
Champasack	9.1	0.0%	48.1%	2.4%	32.6%	16.9%
Attapeu	5	0.0%	47.4%	1.2%	35.5%	15.9%
<b>Total</b>	<b>115.2</b>	<b>0.2%</b>	<b>48.0%</b>	<b>2.3%</b>	<b>30.0%</b>	<b>19.6%</b>

**Table 9: The number of agricultural households that raise aquatic animals and average income from the selling of aquatic animals categorized by the province in 2019/20**

Province	The number of agriculture household ('000)	The number of agriculture household with aquatic animals ('000)	The percentage of household that gained revenues from the aquatic animals	The average income from the aquatic animals ('000)
<b>North</b>	<b>236.7</b>	<b>13.7</b>	<b>17.5%</b>	<b>4,142</b>
Phongsaly	20.6	1.4	19.1%	1,869
Luangnamtha	24.1	1.3	25.4%	8,139
Oudomxay	39.1	1.8	30.8%	3,701
Bokeo	19	0.6	5.0%	5,256
Luangprabang	50.5	1.8	21.1%	4,718
Huaphanh	30.8	4.4	14.7%	3,325
Xayaboury	52.5	2.3	7.2%	2,850
<b>Center</b>	<b>274.4</b>	<b>34.2</b>	<b>11.7%</b>	<b>3,351</b>
Vientiane Capital	20.4	1.8	16.5%	6,287
Xiengkhuang	24.3	3.8	18.0%	5,622
Vientiane Province	41.5	4.8	18.7%	4,468
Borikhamxay	30	0.9	21.8%	4,650
Khammuane	38.9	0.9	8.2%	411
Savannakhet	110.9	21.1	8.2%	1,341
Xaysomboun	8.5	0.8	15.5%	3,245
<b>South</b>	<b>133</b>	<b>6.2</b>	<b>8.4%</b>	<b>3,738</b>
Saravane	44.5	3.5	6.5%	4,911
Sekong	14.3	0.6	6.2%	13,509
Champasack	58.3	1.3	18.9%	1,441
Attapeu	16	0.8	1.7%	144
<b>Total</b>	<b>644.1</b>	<b>54</b>	<b>12.8%</b>	<b>3,657</b>

**Table 10: The agricultural household that conducts the fishery and average income from the hunting of aquatic animals categorized by the province in 2019/20**

<b>Province</b>	<b>The number of agriculture household ('000)</b>	<b>The number of agriculture household with aquatic animals ('000)</b>	<b>The percentage of household that gained revenues from the aquatic animals</b>	<b>The average income from the aquatic animals ('000)</b>
<b><i>North</i></b>	<b><i>236.7</i></b>	<b><i>86.4</i></b>	<b><i>7.5%</i></b>	<b><i>1,460</i></b>
Phongsaly	20.6	10.6	5.9%	935
Luangnamtha	24.1	9.7	4.5%	1,655
Oudomxay	39.1	20.1	5.7%	1,120
Bokeo	19	7.5	3.3%	804
Luangprabang	50.5	15	12.4%	1,905
Huaphanh	30.8	11.6	8.2%	1,354
Xayaboury	52.5	11.7	10.4%	2,447
<b><i>Center</i></b>	<b><i>274.4</i></b>	<b><i>150.1</i></b>	<b><i>11.5%</i></b>	<b><i>1,910</i></b>
Vientiane Capital	20.4	4.2	22.1%	1,856
Xiengkhuang	24.3	8.7	5.8%	1,186
Vientiane Province	41.5	21	13.0%	2,076
Borikhamxay	30	14	18.3%	3,625
Khammuane	38.9	26.9	7.2%	1,447
Savannakhet	110.9	71.9	10.0%	1,220
Xaysomboun	8.5	3.3	10.0%	1,960
<b><i>South</i></b>	<b><i>133</i></b>	<b><i>73.3</i></b>	<b><i>15.9%</i></b>	<b><i>1,417</i></b>
Saravane	44.5	23.8	6.4%	1,198
Sekong	14.3	8.7	5.2%	461
Champasack	58.3	29.7	26.8%	3,216
Attapeu	16	11.1	15.4%	792
<b>Total</b>	<b><i>644.1</i></b>	<b><i>309.8</i></b>	<b><i>11.4%</i></b>	<b><i>1,988</i></b>



**Table 11: The households that raise the aquatic animals categorized by the breeding techniques and provinces in 2019/20**

Province	The number of agriculture household ('000)	The breeding techniques (%)			
		In the rice field	Swamp	Reservoir	Tank
<b>North</b>	<b>13.7</b>	<b>7.4%</b>	<b>87.5%</b>	<b>2.3%</b>	<b>2.8%</b>
Phongsaly	1.4	5.4%	88.9%	5.7%	0.0%
Luangnamtha	1.3	0.0%	69.9%	6.9%	23.3%
Oudomxay	1.8	6.0%	90.3%	3.2%	0.6%
Bokeo	0.6	13.5%	85.2%	1.3%	0.0%
Luangprabang	1.8	1.6%	92.2%	3.6%	2.5%
Huaphanh	4.4	14.9%	84.5%	0.1%	0.5%
Xayaboury	2.3	2.3%	97.4%	0.0%	0.3%
<b>Center</b>	<b>34.2</b>	<b>3.4%</b>	<b>93.1%</b>	<b>3.1%</b>	<b>0.4%</b>
Vientiane Capital	1.8	0.0%	84.9%	13.0%	2.1%
Xiengkhuang	3.8	9.8%	89.7%	0.6%	0.0%
Vientiane Province	4.8	1.8%	85.7%	11.7%	0.8%
Borikhamxay	0.9	14.6%	80.8%	4.6%	0.0%
Khammuane	0.9	3.1%	86.8%	9.0%	1.1%
Savannakhet	21.1	2.5%	97.0%	0.3%	0.2%
Xaysomboun	0.8	0.0%	97.1%	2.9%	0.0%
<b>South</b>	<b>6.2</b>	<b>4.2%</b>	<b>94.4%</b>	<b>1.4%</b>	<b>0.0%</b>
Saravane	3.5	6.0%	94.0%	0.0%	0.0%
Sekong	0.6	6.6%	93.4%	0.0%	0.0%
Champasack	1.3	0.3%	96.7%	3.1%	0.0%
Attapeu	0.8	1.2%	93.2%	5.6%	0.0%
<b>Total</b>	<b>54</b>	<b>4.5%</b>	<b>91.8%</b>	<b>2.7%</b>	<b>1.0%</b>

**Table 12: The percentage of the agricultural household that hunt the aquatic animals categorized by the sources divided by the province in 2018/20**

Province	The number of agricultural households that hunt the fishes ('000)	Hunting place (%)						
		River	Natural Lake	Swamp	Rice field	Irrigation canal	Shared swamp of the village	Others
<b><i>North</i></b>	<b><i>86.4</i></b>	<b><i>69.5%</i></b>	<b><i>8.3%</i></b>	<b><i>6.4%</i></b>	<b><i>4.2%</i></b>	<b><i>4.0%</i></b>	<b><i>0.2%</i></b>	<b><i>7.4%</i></b>
Phongsaly	10.6	78.3%	5.8%	2.8%	0.3%	0.4%	0.0%	12.5%
Luangnamtha	9.7	53.4%	11.2%	13.2%	8.5%	9.9%	0.2%	3.5%
Oudomxay	20.1	75.6%	4.0%	2.6%	4.4%	2.7%	0.3%	10.5%
Bokeo	7.5	55.1%	15.7%	13.3%	5.5%	9.3%	0.1%	1.0%
Luangprabang	15	67.8%	9.9%	6.5%	2.8%	4.2%	0.5%	8.3%
Huaphanh	11.6	88.1%	2.2%	2.7%	0.6%	0.0%	0.1%	6.2%
Xayaboury	11.7	69.4%	10.6%	5.0%	5.9%	1.1%	0.0%	8.0%
<b><i>Center</i></b>	<b><i>150.1</i></b>	<b><i>41.8%</i></b>	<b><i>20.5%</i></b>	<b><i>13.5%</i></b>	<b><i>9.7%</i></b>	<b><i>2.8%</i></b>	<b><i>5.2%</i></b>	<b><i>6.4%</i></b>
Vientiane Capital	4.2	45.4%	27.7%	8.8%	5.1%	3.7%	7.5%	1.9%
Xiengkhuang	8.7	54.2%	11.8%	13.0%	9.9%	6.3%	0.6%	4.3%
Vientiane Province	21	47.2%	22.9%	10.4%	12.6%	4.9%	1.0%	1.1%
Borikhamxay	14	43.6%	15.5%	14.9%	4.3%	1.5%	5.6%	14.6%
Khammuane	26.9	39.9%	24.0%	15.0%	7.3%	1.4%	7.6%	4.8%
Savannakhet	71.9	38.9%	20.3%	14.1%	10.7%	2.8%	5.9%	7.4%
Xaysomboun	3.3	61.9%	11.2%	3.3%	15.5%	2.1%	0.3%	5.6%
<b><i>South</i></b>	<b><i>73.3</i></b>	<b><i>43.1%</i></b>	<b><i>19.8%</i></b>	<b><i>13.7%</i></b>	<b><i>12.1%</i></b>	<b><i>3.9%</i></b>	<b><i>2.5%</i></b>	<b><i>4.8%</i></b>
Saravane	23.8	62.6%	11.6%	8.4%	7.3%	3.2%	1.1%	5.9%
Sekong	8.7	48.9%	20.7%	14.8%	7.1%	6.5%	1.0%	1.1%
Champasack	29.7	39.7%	21.1%	14.1%	15.2%	2.5%	2.5%	4.8%
Attapeu	11.1	27.7%	25.0%	17.7%	13.5%	6.1%	4.5%	5.5%
<b>Total</b>	<b>309.8</b>	<b>47.6%</b>	<b>17.9%</b>	<b>12.1%</b>	<b>9.2%</b>	<b>3.4%</b>	<b>3.5%</b>	<b>6.2%</b>

## The Annex of Village Information

**Table 1: Some infrastructure categorized by the province, type of villages, type of land of each province in 2020**

Province/ Type of village/ Type of land	The infrastructure of each type (% of village)											
	No. of village	Village primary school	Village semi- primary school	The primary school less than 1 hour walk	The pharmacy or drug kit in village	District hospital or village hospital	District hospital or hospital less than 1 hour walk	Village with electricity	Village that uses the gov. power grid	Supply of clean water within the village	Year- round motor able road to district	No motor able road to district
<b>North</b>	<b>3,497</b>	<b>2,878</b>	<b>404</b>	<b>298</b>	<b>1,375</b>	<b>740</b>	<b>2,257</b>	<b>3,070</b>	<b>2,825</b>	<b>554</b>	<b>3,289</b>	<b>208</b>
Phongsaly	516	351	128	59	122	71	314	406	310	45	479	37
Luangnamtha	351	284	48	27	103	79	231	329	301	95	340	11
Oudomxay	473	390	61	23	226	90	307	392	372	64	417	56
Bokeo	245	188	26	38	100	64	168	238	234	44	244	1
Luangprabang	751	650	69	72	252	162	468	627	573	143	727	24
Huaphanh	729	640	51	41	337	128	496	654	620	46	654	75
Xayaboury	432	375	21	38	235	146	273	424	415	117	428	4
<b>Center</b>	<b>3,361</b>	<b>2,773</b>	<b>304</b>	<b>340</b>	<b>1,532</b>	<b>952</b>	<b>2,209</b>	<b>3,219</b>	<b>3,136</b>	<b>745</b>	<b>3,303</b>	<b>58</b>
Vientiane Capital	482	369	37	76	294	214	266	482	475	321	481	1
Xiengkhuang	474	349	40	88	186	80	349	447	435	60	452	22
Vientiane Province	430	357	39	56	232	138	286	427	414	98	426	4
Borikhamxay	295	246	36	15	177	91	183	292	282	66	289	6
Khammuane	566	473	57	66	169	140	390	537	522	74	556	10
Savannakhet	1,023	898	87	37	429	258	684	944	920	118	1,008	15
Xaysomboun	91	81	8	2	45	31	51	90	88	8	91	0
<b>South</b>	<b>1,558</b>	<b>1,260</b>	<b>232</b>	<b>86</b>	<b>568</b>	<b>378</b>	<b>1,060</b>	<b>1,429</b>	<b>1,375</b>	<b>279</b>	<b>1,508</b>	<b>50</b>
Saravane	581	443	112	41	162	102	443	501	494	61	572	9
Sekong	195	179	12	4	67	43	109	162	126	55	194	1
Champasack	639	507	100	37	264	177	430	634	623	140	599	40
Attapeu	143	131	8	4	75	56	78	132	132	23	143	0
<b>Total</b>	<b>8,416</b>	<b>6,911</b>	<b>940</b>	<b>724</b>	<b>3,475</b>	<b>2,070</b>	<b>5,526</b>	<b>7,718</b>	<b>7,336</b>	<b>1,578</b>	<b>8,100</b>	<b>316</b>

**Table 1: Some infrastructure categorized by the province, type of villages, type of land of each province in 2020 (Cont.)**

Province/ Type of village/ Type of land	No. of village	The infrastructure of each type (% of village)										
		Village primary school	Village semi- primary school	The primary school less than 1 hour walk	The pharmacy or drug kit in village	District hospital or village hospital	District hospital or hospital less than 1 hour walk	Village with electricity	Village that uses the gov. power grid	Supply of clean water within the village	Year- round motor able road to district	No motor able road to district
Urban village	1,472	1,164	92	224	780	679	789	1,466	1,440	1,071	1,472	0
Rural area with road access	6,372	5,266	773	466	2,481	1,311	4,425	5,840	5,562	499	6,372	0
Rural area with no road access	572	481	75	34	214	80	312	412	334	8	256	316
<b>Total</b>	1,472	1,164	92	224	780	679	789	1,466	1,440	1,071	1,472	0
Lowland	6,372	5,266	773	466	2,481	1,311	4,425	5,840	5,562	499	6,372	0
Upland	572	481	75	34	214	80	312	412	334	8	256	316
Plateau	1,472	1,164	92	224	780	679	789	1,466	1,440	1,071	1,472	0
Mixture of Land type	6,372	5,266	773	466	2,481	1,311	4,425	5,840	5,562	499	6,372	0

**Table 2: Sources of electricity categorized by the province, types of village and soil in 2020**

Province/ Type of village/ Type of land	No. of village	% of village with electricity use	Source of Electricity (% of village)			
			Gov. Power grid	Gov. Generator	Water dipping	Solar powered
<b>North</b>	<b>3,497</b>	<b>88%</b>	<b>2,825</b>	<b>32</b>	<b>133</b>	<b>201</b>
Phongsaly	516	79%	310	4	38	97
Luangnamtha	351	94%	301	4	9	30
Oudomxay	473	83%	372	4	7	20
Bokeo	245	97%	234	6	1	5
Luangprabang	751	83%	573	3	33	40
Huaphanh	729	90%	620	9	43	4
Xayaboury	432	98%	415	2	2	5
<b>Center</b>	<b>3,361</b>	<b>96%</b>	<b>3,136</b>	<b>39</b>	<b>16</b>	<b>86</b>
Vientiane Capital	482	100%	475	1	0	12
Xiengkhuang	474	94%	435	10	4	7
Vientiane Province	430	99%	414	6	1	3
Borikhamxay	295	99%	282	1	1	0
Khammuane	566	95%	522	6	2	9
Savannakhet	1,023	92%	920	12	4	55
Xaysomboun	91	99%	88	3	4	0
<b>South</b>	<b>1,558</b>	<b>92%</b>	<b>1,375</b>	<b>12</b>	<b>36</b>	<b>90</b>
Saravane	581	86%	494	4	3	35
Sekong	195	83%	126	0	32	39
Champasack	639	99%	623	7	1	5
Attapeu	143	92%	132	1	0	11
<b>Total</b>	<b>8,416</b>	<b>92%</b>	<b>7,336</b>	<b>83</b>	<b>185</b>	<b>377</b>
Urban village	1,472	100%	1,440	14	5	21
Rural area with road access	6,372	92%	5,562	66	136	303
Rural area with no road access	572	72%	334	3	44	53
<b>Total</b>	<b>8,416</b>	<b>92%</b>	<b>7,336</b>	<b>83</b>	<b>185</b>	<b>377</b>
Lowland	3,529	98%	3,390	30	9	100
Upland	2,914	81%	2,098	28	157	235
Plateau	1,661	96%	1,571	14	14	27
Mixture of Land type	312	94%	277	11	5	15

**Table 3: Sources of water for the household use categorized by the province, type of villages and soil in 2020**

Province/ Type of village/ Type of land	No. of village	Sources of water for the household use (% of village)						
		Water utility	Under- ground water	Closed- well	Opened- well	River, dam, lake	Rain	Other sources
<b>North</b>	<b>3,497</b>	<b>17.0%</b>	<b>10.0%</b>	<b>13.0%</b>	<b>6.0%</b>	<b>30.0%</b>	<b>10.0%</b>	<b>80.0%</b>
Phongsaly	516	8.7%	1.6%	2.9%	2.1%	37.8%	8.5%	86.0%
Luangnamtha	351	27.1%	6.6%	9.7%	5.1%	19.9%	4.6%	83.0%
Oudomxay	473	13.5%	4.4%	4.0%	7.0%	34.5%	12.1%	87.0%
Bokeo	245	18.0%	18.0%	28.6%	11.0%	39.2%	12.7%	74.0%
Luangprabang	751	19.0%	5.9%	2.5%	2.0%	27.7%	8.8%	82.0%
Huaphanh	729	6.3%	1.2%	2.6%	1.8%	16.5%	5.5%	101.0%
Xayaboury	432	27.1%	35.6%	37.5%	14.4%	31.9%	19.2%	50.0%
<b>Center</b>	<b>3,361</b>	<b>23.0%</b>	<b>48.0%</b>	<b>31.0%</b>	<b>24.0%</b>	<b>22.0%</b>	<b>17.0%</b>	<b>41.0%</b>
Vientiane Capital	482	66.6%	62.7%	30.3%	14.5%	6.0%	2.9%	1.0%
Xiengkhuang	474	12.7%	7.6%	27.6%	15.0%	19.0%	12.7%	93.0%
Vientiane Province	430	22.8%	64.2%	55.1%	38.6%	24.2%	12.3%	33.0%
Borikhamxay	295	22.4%	41.0%	40.3%	29.8%	18.0%	13.6%	51.0%
Khammuane	566	13.1%	60.4%	32.7%	36.9%	26.0%	26.5%	13.0%
Savannakhet	1023	11.5%	81.9%	17.5%	23.6%	31.0%	35.8%	11.0%
Xaysomboun	91	8.8%	19.8%	16.5%	11.0%	28.6%	15.4%	82.0%
<b>South</b>	<b>1,558</b>	<b>19.0%</b>	<b>67.0%</b>	<b>9.0%</b>	<b>13.0%</b>	<b>38.0%</b>	<b>36.0%</b>	<b>33.0%</b>
Saravane	581	10.5%	85.7%	3.1%	11.0%	34.3%	43.0%	24.0%
Sekong	195	28.2%	31.8%	7.2%	12.8%	42.6%	26.2%	67.0%
Champasack	639	21.9%	84.4%	8.3%	9.4%	43.5%	37.6%	7.0%
Attapeu	143	16.1%	67.8%	18.9%	18.9%	30.1%	39.2%	36.0%
<b>Total</b>	<b>8,416</b>	<b>27.0%</b>	<b>35.0%</b>	<b>16.0%</b>	<b>11.0%</b>	<b>27.0%</b>	<b>17.0%</b>	<b>49.0%</b>
Urban village	1472	73.0%	46.0%	27.0%	14.0%	14.0%	11.0%	18.0%
Rural area with road access	6372	8.0%	42.0%	16.0%	15.0%	31.0%	21.0%	56.0%
Rural area with no road access	572	1.0%	17.0%	5.0%	4.0%	37.0%	20.0%	73.0%
<b>Total</b>	<b>8,416</b>	<b>18.0%</b>	<b>34.0%</b>	<b>17.0%</b>	<b>13.0%</b>	<b>28.0%</b>	<b>18.0%</b>	<b>60.0%</b>
Lowland	3529	30.0%	70.0%	26.0%	22.0%	23.0%	26.0%	11.0%
Upland	2914	6.0%	9.0%	5.0%	5.0%	33.0%	12.0%	90.0%
Plateau	1661	17.0%	40.0%	22.0%	16.0%	30.0%	19.0%	59.0%
Mixture of Land type	312	17.0%	20.0%	13.0%	10.0%	25.0%	16.0%	79.0%

**Table 4: The services / administration group categorized by the province, type of villages and soil in 2020**

Province/ Type of village/ Type of land	No. of village	The administration social services (% of village)				
		Production group / cooperative	Village development fund	Forest / soil hand-over	Village re- settlement over the past 10 years	Village re- settlement plans
<b>North</b>	<b>3,497</b>	<b>1,302</b>	<b>932</b>	<b>2,213</b>	<b>500</b>	<b>130</b>
Phongsaly	516	114	92	339	87	28
Luangnamtha	351	127	131	260	42	9
Oudomxay	473	148	122	375	64	19
Bokeo	245	87	101	163	28	12
Luangprabang	751	363	177	456	166	33
Huaphanh	729	267	93	300	81	19
Xayaboury	432	196	216	320	32	10
<b>Center</b>	<b>3,361</b>	<b>1,167</b>	<b>1,136</b>	<b>1,422</b>	<b>318</b>	<b>118</b>
Vientiane Capital	482	98	294	148	55	16
Xiengkhuang	474	168	91	264	53	14
Vientiane Province	430	195	169	249	43	31
Borikhamxay	295	131	143	228	47	16
Khammuane	566	214	200	242	50	22
Savannakhet	1023	313	199	224	48	16
Xaysomboun	91	48	40	67	22	3
<b>South</b>	<b>1,558</b>	<b>450</b>	<b>395</b>	<b>697</b>	<b>137</b>	<b>46</b>
Saravane	581	117	94	174	28	13
Sekong	195	95	26	92	34	6
Champasack	639	174	228	349	51	23
Attapeu	143	64	47	82	24	4
<b>Total</b>	<b>8,416</b>	<b>2,919</b>	<b>2,463</b>	<b>4,332</b>	<b>955</b>	<b>294</b>
Urban village	1472	461	673	630	134	39
Rural area with road access	6372	2,313	1685	3472	747	225
Rural area with no road access	572	145	105	230	74	30
<b>Total</b>	<b>8,416</b>	<b>2,919</b>	<b>2,463</b>	<b>4,332</b>	<b>955</b>	<b>294</b>
Lowland	3529	1,074	1268	1382	267	106
Upland	2914	1,103	634	1676	459	129
Plateau	1661	615	454	1081	186	50
Mixture of Land type	312	127	107	193	43	9



**Table 5: The agricultural infrastructure in the rural villages categorized by the province types of village and soil in 2020**

Province/ Type of village/ Type of land	No. of village	The agricultural infrastructure (% of rural village)							
		Irrigation system	Water use group	Permanent market	Merchants	Agricultural factors production shop	Agricultural machinery shop	Financial institute	Animal treatment facility
<b>North</b>	<b>2,969</b>	<b>1,135</b>	<b>1,845</b>	<b>204</b>	<b>2,139</b>	<b>202</b>	<b>529</b>	<b>595</b>	<b>519</b>
Phongsaly	460	127	243	18	269	11	36	39	24
Luangnamtha	273	102	166	6	224	6	56	112	50
Oudomxay	417	236	469	14	322	21	96	88	44
Bokeo	204	85	139	12	171	10	60	46	38
Luangprabang	627	122	202	32	524	39	105	88	85
Huaphanh	673	291	324	52	323	66	74	116	191
Xayaboury	315	172	302	70	306	49	102	106	87
<b>Center</b>	<b>2,639</b>	<b>917</b>	<b>1,481</b>	<b>132</b>	<b>2,186</b>	<b>477</b>	<b>999</b>	<b>638</b>	<b>787</b>
Vientiane Capital	201	101	123	12	195	64	103	59	69
Xiengkhuang	407	149	323	15	265	16	56	56	50
Vientiane Province	344	209	334	23	318	132	203	107	144
Borikhamxay	233	94	161	21	226	35	109	91	84
Khammuane	498	124	214	33	404	90	139	142	147
Savannakhet	895	211	273	16	736	131	368	168	272
Xaysomboun	61	29	53	12	42	9	21	15	21

**Table 5: The agricultural infrastructure in the rural villages categorized by the province types of village and soil in 2020 (Cont.)**

Province/ Type of village/ Type of land	No. of village	The agricultural infrastructure (% of rural village)							
		Irrigation system	Water use group	Permanent market	Merchants	Agricultural factors production shop	Agricultural machinery shop	Financial institute	Animal treatment facility
<i>South</i>	<i>1,336</i>	<i>334</i>	<i>445</i>	<i>99</i>	<i>1,103</i>	<i>174</i>	<i>361</i>	<i>380</i>	<i>327</i>
Saravane	524	140	156	9	423	28	134	99	100
Sekong	160	74	165	3	100	15	28	18	44
Champasack	540	105	108	76	492	115	170	199	145
Attapeu	112	15	16	11	88	16	29	64	38
<b>Total</b>	<b>6,944</b>	<b>2,386</b>	<b>3,771</b>	<b>435</b>	<b>5,428</b>	<b>853</b>	<b>1,889</b>	<b>1,613</b>	<b>1,633</b>
Urban village									
Rural area with road access	6372	2255	3548	409	5132	813	1845	1521	1540
Rural area with no road access	572	131	223	26	296	40	44	92	93
<b>Total</b>	<b>6,944</b>	<b>2,386</b>	<b>3,771</b>	<b>435</b>	<b>5,428</b>	<b>853</b>	<b>1,889</b>	<b>1,613</b>	<b>1,633</b>
Lowland	2530	800	1011	161	2247	467	1013	709	774
Upland	2768	828	1376	149	1810	158	383	528	475
Plateau	1392	623	1120	103	1162	204	429	308	319
Mixture of Land type	254	135	264	22	209	24	64	68	65
<b>Total</b>	<b>6,944</b>	<b>2,386</b>	<b>3,771</b>	<b>435</b>	<b>5,428</b>	<b>853</b>	<b>1,889</b>	<b>1,613</b>	<b>1,633</b>

**Table 6: Irrigation type in the rural villages categorized by the province, types of village villages and soil, 2020**

Province/ Type of village/ Type of land	No. of rural Villages	Percentage of the rural villages that use irrigation	Types of irrigation (% of rural village)							The villages that use the irrigation: % of irrigation group		
			Spillway	Reservoir	Water pump	Bunds and gates	Traditional weir	Stone weir	Other types of irrigation	No use	1 Group	More than 2 groups
<i>North</i>	<b>2,969</b>	<b>38%</b>	<b>691</b>	<b>66</b>	<b>17</b>	<b>127</b>	<b>418</b>	<b>118</b>	<b>11</b>	<b>88</b>	<b>347</b>	<b>345</b>
Phongsaly	460	28%	60	6	1	23	64	29	3	9	26	41
Luangnamtha	273	37%	67	7	0	15	24	7	0	10	37	39
Oudomxay	417	57%	162	7	0	26	106	35	3	21	50	82
Bokeo	204	42%	44	9	0	10	43	10	2	8	28	30
Luangprabang	627	19%	70	7	0	14	34	9	1	13	43	39
Huaphanh	673	43%	186	15	4	25	73	18	1	16	99	57
Xayaboury	315	55%	102	15	12	14	74	10	1	11	64	57
<i>Center</i>	<b>2,639</b>	<b>35%</b>	<b>301</b>	<b>177</b>	<b>208</b>	<b>72</b>	<b>194</b>	<b>57</b>	<b>14</b>	<b>117</b>	<b>337</b>	<b>314</b>
Vientiane Capital	201	50%	3	19	55	6	5	2	0	14	49	26
Xiengkhuang	407	37%	81	20	7	6	76	22	0	9	39	82
Vientiane Province	344	61%	84	54	16	26	54	17	0	23	86	72
Borikhamxay	233	40%	33	15	14	5	29	13	5	10	25	37
Khammuane	498	25%	25	7	67	6	9	0	7	17	45	41
Savannakhet	895	24%	56	59	49	21	15	0	2	43	87	42
Xaysomboun	61	48%	19	3	0	2	6	3	0	1	6	14

**Table 6: Irrigation type in the rural villages categorized by the province, types of village villages and soil, 2020 (Cont.)**

Province/ Type of village/ Type of land	No. of rural Villages	Percentag e of the rural villages that use irrigation	Types of irrigation (% of rural village)							The villages that use the irrigation: % of irrigation group		
			Spillway	Reservoir	Water pump	Bunds and gates	Traditional weir	Stone weir	Other types of irrigation	No use	1 Group	More than 2 groups
<i>South</i>	<i>1,336</i>	<i>25%</i>	<i>113</i>	<i>18</i>	<i>85</i>	<i>24</i>	<i>48</i>	<i>2</i>	<i>2</i>	<i>81</i>	<i>98</i>	<i>94</i>
Saravane	524	27%	56	4	35	5	10	2	0	37	48	36
Sekong	160	46%	34	5	1	11	36	0	2	9	17	36
Champasack	540	19%	21	7	45	7	2	0	0	29	31	17
Attapeu	112	13%	2	2	4	1	0	0	0	6	2	5
<b>Total</b>	<b>6,944</b>	<b>34%</b>	<b>1,105</b>	<b>272</b>	<b>310</b>	<b>223</b>	<b>660</b>	<b>177</b>	<b>28</b>	<b>286</b>	<b>782</b>	<b>753</b>
Urban village												
Rural area with road access	6,372	35%	1061	269	304	208	597	146	22	266	757	709
Rural area with no road access	572	23%	44	3	6	15	63	31	6	20	25	44
<b>Total</b>	<b>6,944</b>	<b>34%</b>	<b>1,105</b>	<b>272</b>	<b>310</b>	<b>223</b>	<b>660</b>	<b>177</b>	<b>28</b>	<b>286</b>	<b>782</b>	<b>753</b>
Lowland	2,530	32%	219	126	274	52	69	11	9	146	321	198
Upland	2,768	30%	443	67	11	92	332	99	15	90	239	272
Plateau	1,392	45%	362	68	24	65	213	53	1	39	190	241
Mixture of Land type	254	53%	81	11	1	14	46	14	3	11	32	42

**Table 7: The types of loan in the rural villages categorized by the province, types of villages and soil in 2020**

Province/ Type of village/ Type of land	No. of rural Villages	The agricultural areas that affected by the UXOs	State- owned commercial bank	Types of financial institutes (% of village)		
				Foreign- owned commercial bank	Private- owned commercial bank	Micro-finance institute
<b>North</b>	<b>2,969</b>	<b>7,730</b>	<b>687</b>	<b>57</b>	<b>71</b>	<b>346</b>
Phongsaly	460	75	148	13	8	103
Luangnamtha	273	2	28	1	8	85
Oudomxay	417	341	110	3	4	56
Bokeo	204	0	61	5	7	20
Luangprabang	627	1755	117	19	26	29
Huaphanh	673	5469	147	11	8	2
Xayaboury	315	88	76	5	10	51
<b>Center</b>	<b>2,639</b>	<b>83,245</b>	<b>444</b>	<b>47</b>	<b>68</b>	<b>191</b>
Vientiane Capital	201		49	4	8	31
Xiengkhuang	407	32150	110	11	4	7
Vientiane Province	344	63	81	9	18	59
Borikhamxay	233	282	42	2	2	9
Khammuane	498	25521	47	16	23	19
Savannakhet	895	21584	94	4	12	61
Xaysomboun	61	3645	21	1	1	5
<b>South</b>	<b>1,336</b>	<b>12,182</b>	<b>198</b>	<b>19</b>	<b>39</b>	<b>154</b>
Saravane	524	5578	49	2	14	54
Sekong	160	4938	18	2	1	2
Champasack	540	997	98	13	24	61
Attapeu	112	669	33	2	0	37
<b>Total</b>	<b>6,944</b>	<b>103,157</b>	<b>1,329</b>	<b>123</b>	<b>178</b>	<b>691</b>
Urban village						
Rural area with road access	6,372	99343	1240	122	174	670
Rural area with no road access	572	3814	89	1	4	21
<b>Total</b>	<b>6,944</b>	<b>103,157</b>	<b>1,329</b>	<b>123</b>	<b>178</b>	<b>691</b>
Lowland	2,530	10227	359	42	83	244
Upland	2,768	53815	611	38	48	288
Plateau	1,392	37430	299	35	43	138
Mixture of Land type	254	1685	60	8	4	21

**Table 8: The agricultural characteristics of the rural villages categorized by the province, types of villages and soil, 2020**

Province/ Type of village/ Type of land	No. of rural Villages	Agricultural areas affected by the UXOs ('000)		% of the rural villages	
		% of villages	The areas affected	Turn around cultivation	Shifting cultivation
<b>North</b>	<b>2,969</b>	<b>4%</b>	<b>7.73</b>	<b>1,997</b>	<b>424</b>
Phongsaly	460	3%	0.075	286	56
Luangnamtha	273	5%	0.002	185	29
Oudomxay	417	3%	0.341	300	113
Bokeo	204	7%	0	136	47
Luangprabang	627	2%	1.755	499	81
Huaphanh	673	2%	5.469	467	69
Xayaboury	315	4%	0.088	124	29
<b>Center</b>	<b>2,639</b>	<b>40%</b>	<b>83.245</b>	<b>753</b>	<b>255</b>
Vientiane Capital	201			19	8
Xiengkhuang	407	43%	32.15	215	93
Vientiane Province	344	51%	0.063	124	34
Borikhamxay	233	75%	0.282	94	35
Khammuane	498	35%	25.521	77	24
Savannakhet	895	19%	21.584	177	44
Xaysomboun	61	20%	3.645	47	17
<b>South</b>	<b>1,336</b>	<b>54%</b>	<b>12.182</b>	<b>321</b>	<b>117</b>
Saravane	524	22%	5.578	114	46
Sekong	160	71%	4.938	103	25
Champasack	540	21%	0.997	56	23
Attapeu	112	102%	0.669	48	23
<b>Total</b>	<b>6,944</b>	<b>80%</b>	<b>103.157</b>	<b>3,071</b>	<b>796</b>
Urban village					
Rural area with road access	6,372	13%	99.343	2720	709
Rural area with no road access	572	146%	3.814	351	87
<b>Total</b>	<b>6,944</b>	<b>33%</b>	<b>103.157</b>	<b>3,071</b>	<b>796</b>
Lowland	2,530	10%	10.227	279	120
Upland	2,768	9%	53.815	2029	439
Plateau	1,392	18%	37.43	607	195
Mixture of Land type	254	97%	1.685	156	42

**Table 9: The outstanding issues / obstacles for the farmers in the rural areas categorized by the province, villages types, and soil types, 2020**

Province/ Type of village/ Type of land	No. of rural Villages	The outstanding issues / obstacles of the rural villages									
		Not suitable land	Lack of good seeds	Lack of genus	Inadequate irrigation	Lack of labor	Lack of distributi on place	Lack of pulling, pushing vehicles	No pesticide	Low produc tivity price	Low product ivity price
<b>North</b>	<b>2,969</b>	<b>1252</b>	<b>1230</b>	<b>1022</b>	<b>1411</b>	<b>322</b>	<b>1165</b>	<b>585</b>	<b>1291</b>	<b>1778</b>	<b>255</b>
Phongsaly	460	137	200	165	164	59	181	95	214	258	49
Luangnamtha	273	103	155	135	159	24	123	51	122	177	32
Oudomxay	417	237	174	160	223	50	160	98	209	291	41
Bokeo	204	85	99	57	101	19	108	25	61	122	13
Luangprabang	627	243	317	275	209	99	267	132	291	445	53
Huaphanh	673	327	187	164	354	61	226	148	280	261	41
Xayaboury	315	120	98	66	201	10	100	36	114	224	26
<b>Center</b>	<b>2,639</b>	<b>1126</b>	<b>1344</b>	<b>974</b>	<b>1311</b>	<b>397</b>	<b>960</b>	<b>397</b>	<b>1024</b>	<b>1301</b>	<b>181</b>
Vientiane Capital	201	52	73	35	107	25	61	13	35	102	20
Xiengkhuang	407	208	144	141	186	75	158	90	182	229	22
Vientiane Province	344	105	169	149	219	38	142	33	134	218	24
Borikhamxay	233	97	114	70	130	32	100	40	86	135	29
Khammuane	498	212	292	190	217	63	180	57	194	190	16
Savannakhet	895	430	518	360	410	159	285	151	365	393	67
Xaysomboun	61	22	34	29	42	5	34	13	28	34	3
<b>South</b>	<b>1,336</b>	<b>538</b>	<b>820</b>	<b>524</b>	<b>541</b>	<b>225</b>	<b>480</b>	<b>211</b>	<b>606</b>	<b>692</b>	<b>100</b>
Saravane	524	201	326	188	214	79	157	94	228	231	16
Sekong	160	97	88	81	101	22	57	33	87	71	25
Champasack	540	174	319	193	191	94	205	49	218	329	55
Attapeu	112	66	87	62	35	30	61	35	73	61	4
<b>Total</b>	<b>6,944</b>	<b>2,916</b>	<b>3,394</b>	<b>2,520</b>	<b>3,263</b>	<b>944</b>	<b>2,605</b>	<b>1,193</b>	<b>2,921</b>	<b>3,771</b>	<b>536</b>

**Table 9: The outstanding issues / obstacles for the farmers in the rural areas categorized by the province, villages types, and soil types, 2020 (Cont.)**

Province/ Type of village/ Type of land	No. of rural Villages	The outstanding issues / obstacles of the rural villages									
		Not suitable land	Lack of good seeds	Lack of genus	Inadequate irrigation	Lack of labor	Lack of distribut ion place	Lack of pulling, pushing vehicles	No pestici de	Low product ivity price	Low product ivity price
Urban village											
Rural area with road access	6,372	2687	3128	2327	3021	879	2351	1021	2659	3523	477
Rural area with no road access	572	229	266	193	242	65	254	172	262	248	59
<b>Total</b>	<b>6,944</b>	<b>2,916</b>	<b>3,394</b>	<b>2,520</b>	<b>3,263</b>	<b>944</b>	<b>2,605</b>	<b>1,193</b>	<b>2,921</b>	<b>3,771</b>	<b>536</b>
Lowland	2,530	981	1383	861	1194	387	864	249	943	1248	179
Upland	2,768	1257	1317	1125	1144	378	1127	709	1328	1534	231
Plateau	1,392	548	585	440	780	156	509	191	546	856	105
Mixture of Land type	254	130	109	94	145	23	105	44	104	133	21



## The Questionnaire of the agent household



## THE THIRD LAO CENSUS OF AGRICULTURE 2019/2020

This census is conducting base on the Statistics Law and the Decision of the Prime Minister No. 46/PM, dated 31/05/2017 on the 3rd Lao Census of Agriculture 2019/2020

<< Your information will be kept confidential and used for statistical purposes only >>

### SAMPLE QUESTIONNAIRE

*Coodinate Point* X  Y

Q1. Province's name  Province ID

Q2. District's Name  District ID

Q3. Village's name  Village ID

Q4. Unit No.  Q5. Building No.  Q6. Household No. in building

Q7. Household No. in unit  Q8. Household head's name

Q8.1. Are you a member of this household?  1. Yes  2. No → End of interview

Q9. Respondent's name  Q10. Respondent's sex  1. Male  2. Female

Q11. Respondent's phone number

Q12. Is your household located in the area of the village's map?  1. Yes  2. No  3. There isn't the village's map

Q13. Agricultural activities.  1. Crop cultivation  2. Raising Livestock  3. Poultry  4. Planting for wood  5. Fhisng  6. Aquaculture

Q14. Holder status:  1. Single household → Skip to Part 1  2. Multi household → Skip to Part 1  3. Production group

Q15. Which groups does your household belong to?  1. Crop cultivation  2. Clean Agriculture  3. Raising Livestock  
 4. Fishing  5. Agro-Processing  6. Other

**Part 1: Household Characteristics**

Q1. How many people are there in your household ?

1. Total  persons      2. Female  persons

No.	Q2. Name and surname	Q3. Sex	Q4. Age	Q5. Relation with the household head	Q6. Marital status	Q7. Highest education level	Q8. Labour force status	Q9. Main occupation in last 12 month	Q10. Secondary occupation in last 12 month
		1. Male 2. Female							
1	2	3	4	5	6	7	8	9	10
0   1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0   2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0   3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0   4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0   5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0   6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Relation to the household head (column 5)**

1. Household head      2. Spouse      3. Son/daughter      4. Son/daughter in law      5. Parents/grand parents  
6. Niece/nephew      7. Relative      8. Non-relatives members

**Marital status (column 6)**

1. Single      2. Married      3. Divorced      4. Separated      5. Widowed      6. cohabit

**Highest education level (column 7)**

1. Uneducated      2. Kindergarten      3. Primary school      4. Secondary level      5. High school      6. undergraduate  
7. Bachelor degree      9. Master/Ph.D degree      9. Higher than Ph.D      10. Other training      11. Other

**Labour force status (column 8)**

1. Within the labour force      2. Outside the labour force

**Main occupation in last 12 month (column 9)**

1. Employer      2. Employee      3. Self-employed      4. Working without wage      5. Other

**Secondary occupation in last 12 month (column 10)**

1. Employer      2. Employee      3. Self-employed      4. Working without wage      5. Other

**Part 2: Land Holding**

Q1. How many parcels of land did you hold in 2019? <input style="width: 50px;" type="text"/> Parcel					Q1.1. Total land area? <input style="width: 50px;" type="text"/> ha										
Q2. How many agriculture parcels did you hold in 2019? <input style="width: 50px;" type="text"/> Parcel					Q2.1. Total agriculture area? <input style="width: 50px;" type="text"/> ha										
No.	Q3. Are each agricultural parcels locate in this village?				Q4. Geographically of each parcels ?	Q5. Total area of each agriculture parcels? (ha)	Q6. How many hectares did you hold according to the type of main operated use?								
	1. Yes ( <i>Skip to Q4</i> )		If No, please specifies the location of each parcel				1. Lowland	1. Temperary crops Cultivation	2. Raising livestock less than 5 years	3. Fallow land less than 5 years	4. Permanent crops Cultivation	5. Raising livestock for 5 years and over	6. Farm building and farm yards		
	2. No	Q3.1. Province	Q3.2. District	Q3.3. Village										2. Upland	
1	2	3	4	5	6	7	8	9	10	11	12	13			
No	Q6 (Cont)			Q7. Types of Land tenure?	Q8. Types of payment for rental land?	Q9. Sex of the owner of this land parcel ?	Q9.1. Is there your name in the land tenure document/ certificate ?	Q9.2. Do you have the right for sell this land parcel?	Q9.3. Do you have the right for bequeath in this land parcel to other people?	Q10. Number of year for used this land	Q11. Are there any UXO in this land parcel?				
	7. Planting for wood	8. Aquaculture	9. Other land									( <i>If answer 1, 2 or 4 then skip to Q9</i> )	1. Male	1. Less than 1 year	1. Yes
1	14	15	16	17	18	19	20	21	22	23	24				
<b>Land tenure (Column 17)</b>															
1. Legal ownership				2. Non-legal ownership				3. Rented from someone else				4. Other			
<b>Term of rental (Column 18)</b>															
1. Cash			2. Share of produce			3. Labour exchange			4. Other						
<b>Owner list (Column 20)</b>															
1. Yes				2. No				3. Without document							
<b>Right of selling (Column 21 )</b>															
1. Yes				2. No				3. Refuse to answer				99. Don't know			
<b>Rigth of bequeath (Column)</b>															
1. Yes				2. No				3. Refuse to answer				99. Don't know			

Q12. How much area does your household rent in 2019?

ha

Q13. How much area does your household rent out in 2019?

ha

Q14. How much area does your household left fallow in 2019?

ha

**If no** → **Skip to part 3**

Q15. What reasons does your household leave fallow in 2019 ?

- 1 Drought
- 2 Flooding
- 3 Lack of labor

- 4 Lack of budget
- 5 Other.

### Part 3: Irrigation Using

Q1. Did your household use irrigation to produce agriculture?

- 1 Yes                       2 No      →      *Skip to part 4*

Q1.1. What type of irrigation system did your household use ?

- 1 Fully controlled                       2 Partially controlled

Q2. Where is the source of irrigation? (Multiple choices)

- 1 Ponds/rivers/lakes                       4 Tap water supply  
 2 Ground water/wells                       5 Treated wastewater  
 3 Both answer 1 and 2                       6 Other

Q3. What kind of irrigation did your household use? (Multiple choices)

- 1 Weirs                       5 Weirs temporary  
 2 Reservoirs                       6 Gabions  
 3 Pump scheme                       7 Other  
 4 Gate and dikes

Q4. How many hectares of the total irrigation area did you use?

1. Dry Season  Hectares  
2. Wet Season  Hectares

Q5. In 2019, did your agriculture area receive enough irrigation water?

- 1 Yes  
 2 No

Q6. In 2019, how many hectares of your actual irrigated area? ?

- 1 Surface irrigation  Hectares  
2 Sprinkler irrigation  Hectares  
3 Drip irrigation  Hectares

Q7. How many hectares did your household actually use for an irrigation system?

- 1 Temporary crop  Hectares  
2 Permanent crop  Hectares  
3 Fish ponds  Hectares

Q8. In 2019, Did your household pay for irrigation fee?

- 1 Yes                       2 No      →      *Skip to part 4*
- 1 Paid by land area                      Amount  Kips  
2 Paid by used of irrigation volume                      Amount  Kips  
3 Paid by used of gasoline                      Amount  Kips  
4 Other                      Amount  Kips

**Part 4: Crop Cultivation**

**Q1. Did your household cultivate any temporary crop or permanent crop?**

1. Yes  2. No → Skip to Part 5

**Q2. Who was decide to operate crop in your household?**

Write Name and code from Part 1

1. 1st Person

2. 2nd Person

**Part 4.1: Temporary crop cultivation in Wet season**

**Q1. In Wet Season 2019, Did your household plant any temporary crop?**

1. Yes  2. No → Skip to Part 4.2

No.	Q2. What kind of temporary crops did you plant?		Q3. Total Planted Area (Meter square)	Q4. Number of planted time	Q5. Total Harvested Area (Meter square)	Q6.Total Production (Kilogram)	Q7. Type of Variety	Q8. Main source of Variety	Q9. The First year for using the Variety	Q10. What was the main purpose of producing crops? (If answer 1 Skip to Q13)	Q11. How many kilograms did you sell?	Q12. How much? (Kips)
	1. Temporary crop's name	2.Crop Code										
1	2	3	4	5	6	7	8	9	10	11	12	13

**Type of Variety (Column 8)**

1. Local Variety 2. Improved Variety

**Source of Variety (Column 9)**

1. Production from last year 2. purchased from center or DAFOs 3. Production groups 4. Exchange 5. Market/Shop 99. Don't know

**Purpose of producing crops? (Column 12)**

1. Consume 2. Consume and sell 3. Sell

No.	Q2. What kind of temporary crops did you plant?		Q13. Did you used any chemical fertilizer, oganic fertilizer and pesticide for crop cultivation?							
			1.Chemical F	2.Organi fertilizer	3.Manure fertilizer	4.Pesticide for kille	5.Herbicides	6.Yeast disinfe	7.Pesticide fo	8.Other pesticides
	1. Yes	1. Yes	1. Yes	1. Yes	1. Yes	1. Yes	1. Yes	1. Yes		
1	2	3	15	16	17	18	19	20	21	22

**Q15. In Wet season 2019, Did your household cultivte upland crops?**

1. Fixed Cultivation  2. Rotation cultivation  3. Shifting Cultivation  4. No

**Part 4.2: Temporary crop cultivation in Dry season**

**Q1. In Dry Season 2019, Did your household plant any temporary crop?**

1. Yes                       2. No      →      Skip to part 4.3

No.	Q2. What kind of temporary crops did you plant?		Q3. Total Planted Area (Meter square)	Q4. Irrigated Area	Q5. Number of planted time	Q6. Total Harvested Area (Meter square)	Q7. Total Production (Kilogram)	Q8. Type of Variety	Q9. Main source of Variety	Q10. The First year for using the Variety	Q11. What was the main purpose of producing crops? ( <i>If answer 1 Skip to Q14</i> )	Q12. How many kilograms did you sell?
	1. Temporary crop's name	2. Crop Code										
1	2	3	4	5	6	7	8	9	10	11	12	13

**Type of Variety (Column 9)**

1. Local Variety                      2. Improved Variety

**Source of Variety (Column 10)**

1. Production from last year      2. purchased from center or DAFOs      3. Production groups      4. Exchange      5. Market/Shop      99. Don't know

**Purpose of producing crops? (Column 12)**

1. Consume                      2. Consume and sell                      3. Sell

No.	Q2. What kind of temporary crops did you plant?		Q13. How much? (Kips)	Q14. Did you used any chemical fertilizer, organic fertilizer and pesticide for crop cultivation?							
	1. Temporary crop's name	2. Crop Code		1. Chemical Fertilizer	2. Organi fertilizer	3. Manure fertilizer	4. Pesticide for killed insect	5. Herbicides	6. Yeast disinfectant	7. Pesticide for killed mouse	8. Other pesticides
1	2	3	14	15	16	17	18	19	20	21	22



**Part 4.3: Permanent crop**

**Q1. Do you plant any permanent crops?**

1. Yes                       2. No    →    Skip to part 4.4

No.	Q2. What kind of permanent crops did you plant?		Q3. planting Style ? 1. Follow techn 2. Scattered (Skip to Q5)	Q4. Planting follow technique				Q5. Scattered		Q6. Amount of total production in 2019 (Kg)	Q7. Q7. How long were your permanent crops? ( if answer 4 or 99 skip to Q10)	Q8. Type of variety	Q9. Source of Variety
	1. Permanent crop's name	2. Crop Code		1. Planted area	2. Number of planted trees	3. Harvested area	4. Number of harvested trees	1. Number of planted trees	2. Number of harvested trees				
1	2	3	4	5	6	7	8	9	10	11	12	13	14

**Age of permanent crop (Column 12)**

1. Less than 1 year                      2. Between 1-4 years                      3. Between 5-10 years                      4. More than 10 years                      99. Don't Know

**Type of Variety (Column 13)**

1. Local Variety                      2. Improved Variety

**Source of Variety (Column 14)**

1. Production from last year                      2. purchased from center or DAFOs                      3. Production groups                      4. Exchange                      5. Market/Shop                      99. Don't know

No.	Q2. What kind of permanent crops did you plant?		Q10. What was the main purpose of producing crops? (If answer 1 Skip to Q13)	Q11. How many kilograms did you sell?	Q12. How much? (Kips)	Q13. Did you used any chemical fertilizer, organic fertilizer and pesticide for crop cultivation?						
	1. Permanent crop's name	2. Crop Code				1. Chemical Fertilizer 1. Yes 2. No	2. Organi fertilizer 1. Yes 2. No	3. Manure fertilizer 1. Yes 2. No	4. Pesticide for killed insect 1. Yes 2. No	5. Herbi cides 1. Yes 2. No	disinfectan t 1. Yes 2. No	7. Pesticide for killed mouse 1. Yes 2. No
1	2	3	14	15	16	15	16	17	18	19	20	21

**Purpose of producing crops? (Column 14)**

1. Consume                      2. Consume and sell                      3. Sell

**Q14. In 2019, Did your household plant any temporary crop in the area of permanent crop?**

14.1 Wet Season

1. Yes  
 2. No → Skip to Q14.2

No.	14.1.1. What kind of temporary crop did you plant?		14.1.2. Planted area	14.1.3. Harvested area	14.1.4. Production
	1. Temporary crop's name	2. Crop code			
1	2	3	4	5	6

14.2 Dry Season

1. Yes  
 2. No → Skip to Q15

No.	14.2.1 What kind of temporary crop did you plant?		14.2.2. Planted area	14.2.3. Harvested area	14.2.4. Production
	1. Temporary crop's name	2. Crop code			
1	2	3	4	5	6

**Q15. In 2019, Did your household have the seeding for permanent crops?**

1. Yes  2. No

**Q16. In 2019, Did your household plant crop by green house?**

1. Yes  2. No

**Part 4.4: Using Chemical Fertilizer, Organic fertilizer and Manure Fertilizer**

Q1. What quantity did you use those fertilizers?			
No.	Name of Fertilizers	Quantity	Unit
1	2	3	4
1	46-0-0 (Accelerated fertilizer)		
2	15-15-15 (Urea fertilizer)		
3	16-20-0 (for Friuts)		
4	Organic Fertilizer		
5	Manure Fertilizer		

**Part 5: Planted Forest Farm and Non-timber forest products**

**Q1. Does your household plant forest in 0.05 hectares and over?**

1. Yes  2. No → Skip to Q11

No.	Q2. What is the name of industry wood trees ?		Q3.Planting technique?	Q4. Number of trees	Q5.Planted area in hectares ?	Q6. Was your planted forest tree farm register?	Q7. Harvested area in hectares ?	Q8. In 2019, How much the production?	Q9. Unit	Q10. Do you have another planted
	1. Tree's name	2. Tree code								1. Yes
										2. No <i>Skip to</i> Q11
1	2	3	4	5	6	7	8	9	10	11

**Q11. In the last 12 months, did your household gather the Non-timber forest products from the forest?**

1. Yes  2. No → Skip to Q16

No.	Q12. Type of Non-timber forest products ?		Q13. In 2019, how much did you gather Non-timber forest products ?		Q14. Source?	Q15. something else ?
	1. Name	2. Code	1. Quantity	2. Units	1. Your Farm 2. Other places	1. Yes 2. No <i>Skip to</i> Q16
1	2	3	4	5	6	7

**Q16. In the last 12 months, did you get the income from selling the products from your planted forest fram or Non-timber forest products?**

1. Yes  2. No → Skip to Part 6

**Q17. How much income did you receive from selling these products?**

1. Planted forest fram  Kips  
 2. Non-timber forest products  Kips

**Part 6. Livestock**

**Q1. Do you raise any Livestock?**

1. Yes                       2 No      →Skip to Part 7

**Q2. Who were decide to raising livestock in your household?**

**Write Name and code from Part 1**

1. 1st Person

2. 2nd Person 2

<b>Q3. How many cattle does your household raising?</b> <input style="width: 50px;" type="text"/> <b>Head</b>			
<i>(If there are not any cattle enter (0) then skip to Q6)</i>			
Type of Cattle	Age	Q4. Number	Q5. No. of female cattle
	1	2	3
1. Local cattle	1. Less than 1 year	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2. 1-2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
2. Meat cattle	1. Less than 1 year	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2. 1-2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
3. Dairy cows	1. Less than 1 year	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2. 1-2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>

<b>Q6. How many buffalo does your household raising ?</b> <input style="width: 50px;" type="text"/> <b>Head</b>			
<i>(If there are not any buffalo enter (0) then skip to Q9)</i>			
Type of buffalo	Age	Q7. Number	Q8. No. of female buffalo
	1	2	3
1. Local buffalo	1. Less than 1 year	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2. 1-2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
2. Dairy buffalo	1. Less than 1 year	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2. 1-2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 2 years	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>

<b>Q9. How many pig does your household raising?</b> <input style="width: 50px;" type="text"/> <b>Head</b>			
<i>(If there are not any pig enter (0) then skip to Q12)</i>			
Type of pig	Age	Q10. Number	Q11.No. of female
	1	2	3
1. Local pig	1. Less than 3 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2.3-9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
2. Breed pig	1. Less than 3 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2.3-9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>

<b>Q12. How many goat does your household raising?</b> <input style="width: 50px;" type="text"/> <b>Head</b>			
<i>(If there are not any goat enter (0) then skip to Q15)</i>			
Type of goat	Age	Q13. Number	Q14. No. of female
		2	3
1. Local goat	1. Less than 3 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2.3-9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
2. Breed pig	1. Less than 3 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	2.3-9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
	3. More than 9 months	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>

Q15. Q9. How many poultry does your household raising? <input type="text"/> Head					
(If there are not any pig enter (0) then skip to Q18)					
Type of poultry	Item	Q16. Number	17. Source of poultry seed ?		
			1. Seeding by yourself	2. Purchase from center	3. Other
			1	2	3
1. Local Chicken	1. Small breed				
	2. Big breed				
2. Commercial Chicken	1. Broiler chicken				
	2. Layer hen				
3. Turkey					
4. Guinea Fowl					
5. Duck	1. Local duck				
	2. Broiler duck				
	3. Layer duck				
6. Goose					

**These questions are for the type of livestock that have 1 head and over only**

Type of Livestock	Q18. How many livestock head were you register?	Q19. What is the purpose for raising livestock? <i>Please tick (✓)the collect answer</i>					Q20.Type of raising ?	Q21. In 2019, how many newborn livestock(head) or get livestock from other places?		Q22.What type of extend breed for livestock?	
	1	1. Milk	2. sell	3. Draught	4. Breeding	5. Consume		1. Newborn	2. other places	1. Natural	2. Artificial insemination
		2	3	4	5	6					
1.Cattle											
2.Buffalo											
3. Pig											
4. Goat											
5. poultry											

**Type of raising (Q20)**

- 1.Natural                      2. Half natural                      3. Good manage

***These questions are for the type of livestock that have 1 head and over only***

Type of Livestock	Q23. In 2019, was there your household's livestock decreasing as some cases below?						Q24. Did your livestock have the service of Veterinarians?				Q25. Is there a livestock house in your area?	Q26. How far from your house in Meter?
	1. Sell	2. Killed for consume	3. Killed for prevent epidemics	4. Dead because of Natural disasters	5. Disease	6. Other	1. Get vaccinated		2. Heal		1. Yes 2. No	23
	12	13	14	15	16	17	1. No. of time	2.No. of Livestock	1. No. of time	2.No. of Livestock		
1. Cattle												
2. Buffalo												
3. Pig												
4. Goat												
5. Poultry												

***These questions are for the type of livestock that have 1 head and over only***

Type of Livestock	Q27. What kind of food for feeding livestock?					
	1. Crop	2. Planted Gras	3. Natural grass	4. Instant food	5. Mineral rocks	6. Other
	1	2	3	4	5	6
1. Cattle						
2. Buffalo						
3. Pig						
4. Goat						
5. Poultry						

Type of Livestock	28. Does your household raise as below?	Q29. No. of Total livestock ?	Q30. What was your purpose for raising livestock?				
	1. Yes		1. Draught	2. Tourism	3. Sell	4. Consume	5. Breed Extend
	2. No		3	4	5	6	7
	1	2	3	4	5	6	7
1. Elephants							
2. Horse							
3. Sheep							
4. Quail							
5. Ostrich							
6. Insect							
7. Bee							
8. Rabbit							

**Part 7 Aquaculture and Fishery**

**Q1. In 2019, Did your Household raise any aquaculture and fishery?**

1. Yes  2. No → *Skip to Q6*

No.	Q2. Did you raise any aquaculture?		Q3. Where was your farm and how much the area of your farm in meter square?				Q4. Where is your seeding come from ?		
	1. Yes	2. NO	1. In the rice fie	2. Fish Pond	3. Cement basin	4. Cage	1. Breeding by yo	2. Name	3. Supported by Proje
1	2	3	4	5	6	7	8	9	10
1	Fish								
2	Shrimp								
3	Frog								
4	Softshell Turtle								
5	Eel fish								

**Q5. Did you sell any fish or aquaculture?**

1. Yes Q5.1. Total income?  Kips  
 2. No

**Q6. Are there any your household members fishing fish or aquaculture?**

1. Yes  2. No → *Skip to Part 8*

**Q7. In 2019, Where did you or your household members fishing fish or aquaculture?**

1. Rivers  2. Lake or reservoir  3. Swamp or seasonal floodplain  4. Rice field  
 5. Irrigation canal  6. Fish pond  7. Other

**Q8. In 2019, Did your household sell any fish or aquaculture caught in above mentioned?**

1. Yes Q8.1. Total income?  Kips  
 2. No



**Q9. Did your household stock any fish or aquaculture caught in above mentioned?**

1. Yes

2. No

No.	Q10. Does your household have any fishing equipments?		Q11. How much are them?	Q12. Somethings else? 1. Yes 2. No
	Type	Number		
1	2	3	4	5
1	Fishing trap net			
2	Fish casting net			
3	Fishing Lift net			
4	Swing fish net			
5	Fising hook			
6	Spearfishing/Sp			
7	Bamboo fish tra			
8	Bamboo fish tra			

**Part 8: Agricultural machinaries and equipments**

No.	Type of machinaries and equipments	Q1. Did you use these machinaries and equipments?	Q2. Source of machinaries and equipments?	Q3. Did you have another machinaries
		1. Yes 2. No		1. Yes 2. No
1	2	3	4	5
1	Truck			
2	4-wheeled tractor			
3	2-wheeled tractor			
4	Generator			
5	Water pump			
6	Planter or seeder			
7	Fertilizer distributor			
8	Grain dryer			
9	Fruit grader			
10	Incubator			
11	Egg grader			
12	Milking machinery			
13	Sprayer			
14	Weeder			
15	Harvester			
16	Thresher			
17	Rice miller			
18	Crop miller			
19	Other...			

**Source of machinaries and equipments (Column 4)**

- |                       |                                 |                  |                          |
|-----------------------|---------------------------------|------------------|--------------------------|
| 1. Owner              | 2. Owned by sharing with others | 3. Land tenure   | 4. Owned by other people |
| 5. :Group/cooperative | 6. Companies                    | 7. Public sector | 8. Not own               |

**Part 9: Agricultural Extension service**

**Q1. In the past, Did your household loan money from any Finance institute/banks used for agricultural purposes?**

- 1. Yes and already paid the loan back → *Skip to Q5*
- 2. Yes and not paid the loan back yet
- 3. No → *Skip to Q5*

<b>Q2. In present, How much did your household still debted from these sources?</b>	<b>Value (Kips)</b>
1. Public bank	
2. Agricultural extension Bank	
3. Other banks	
4. Microfinance	
5. Village Development Fund	
6. Other	

**Q3. What are the purposes of the loan?**

- 1. Buy crop inputs
- 2. Buy Livestock inputs
- 3. Buy farm equipment
- 4. Buy livestock
- 5. Construct farm buildings
- 6. Buy land
- 7. Other

**Q4. What collateral was used for the loan?**

- 1. Own land
- 2. House
- 3. Vehicles
- 4. Other
- 5. No collateral

**Q5. where did your households get information for agricultural production activities?**

- 1. Television
- 2. Radio
- 3. Magazine
- 4. Newspapers
- 5. Brochure or poster
- 6. Internet
- 7. Among farmers
- 8. Extension service center
- 9. Project
- 10. Public organizations
- 11. Other
- 12. Not receive information

**Q7. What kind of technical skills did your household receive in the last 12 months?**

- 1. Crop production system techniques
- 2. Raising livestock techniques
- 3. Raising fish techniques
- 4. Processing methods
- 5. Other

**Q6. In the last 12 months, Did your household receive technical advice on cropproduction, raising livestock and disease prevention?**

- 1. Yes
- 2. No → *Skip to Q8*

**Q8. Where was your household distribute their products for sell?**

- 1 In the village → *Skip to part 10*
- 2 Other villages
- 3 Not sell → *Skip to part 10*

**Q9. How many kilometers is it from your house to the nearest distributed point?**

Kilometer

**Part 10: Labor (Only the person had 14-64 years old)**

No.	Q1. In the last 12 months, have any of your household members worked as the labor? (Write Name and code from Part 1)	Q2. In the past 12 months, what was your main agricultural activities?  <i>If answer 5 Skip to Q4</i>	Q3. How much time did you spend doing these main activities?			Q4. What second farming activities did you do?  <i>ask only if Q2 = 5, If Q4=5 Skip to Q7</i>	Q5. How much time did you spend doing these second activities?			Q6. In the last 12 months, who has been doing these jobs (growing rice)?										
			1: No. of Months per year	2: No. of days per month	3: Average No. of hours per day		1: No. of Months per year	2: No. of days per month	3: Average No. of hours per day	1. Land preparation	2. Seeding	3. Taking seed off	4. Carry / Distribute	5. Transplanting	6. Weeding	7. Fertilizing	8. Pest control	9. Harvesting	10. Threshing	11. Transportation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

**Main Activities (Column 3)**

1. Crop      2. Livestock      3. Fishery      4. Forestry      5. Other not agriculture activities

**Second Activities (Column 7)**

1. Crop      2. Livestock      3. Fishery      4. Forestry      5. Other not agriculture activities

**Q7. Q7. In the last 12 months, did your household hire labor for agricultural production?**

1. Yes, Hire labor in daily  
 2. Yes, Hire in the sub  $\delta$  Skip to Q9  
 3. No  $\delta$  Skip to Q10

**Q9. How did you pay?**

1. Cash       $\delta$  Q9.1 How much?  Kip       3. Exchange labor  
 2. Production       4. Other

**Q11. In the last 12 months, Did your household receive any other source of income?**

1. Yes F      **Q11.1. How much**  Kips  
 2. No

**Q8. How many outside labor?**

Activities	Rice production		Other products		Livestock		Forest	
	Total	Female	Total	Female	Total	Female	Total	Female
Number								

**Q10. In the last 12 months, had you or any of your household members been employed in agriculture?**

1. Yes F      **Q10.1. Total income?**  Kips  
 2. No

**Part 11 Food security of the household**

**Q1. In the last 12 months, what kind of Natural disaster has your agricultural activities been affected by? (Multiple choices)**

- 1. Flood
- 2. Drought
- 3. Storm
- 4. Pest
- 5. other
- 6. No disaster → *Skip to Q3*

**Q2. How much did your household lose agriculture productions in the last 12 years?**

- 1. Not lose
- 2. Less than 20%
- 3. Between 20-40%
- 4. More than 40%

**Q3. Sub sample household ? (Base on household sample list )**

- 1. Yes
- 2. No → *End of interview*

Q4. During the past 12 months, have you or any member of your household experienced any of the following conditions?	Frequencies
1. Have you or any of your household members been worried about malnutrition due to lack of money or other resources?	
2. Do you or any household member that no eat healthy and nutritious foods due to lack of money or other resources?	
3. Do you or any household member eat only some foods due to lack of money or other resources?	
4. Do you or any member of your household have to fast because of lack of money or resources to access food?	
5. Dis you eat more sugar than others in the household because of because of lack of money or other resources.	
6. Are there times when your household has no food at all due to lack of money or other resources?	
7. Are you or your household hungry but do not eat because you do not have enough money or resources to access food?	
8. Do you or your household have to starve due to lack of money or other resources?	

**Level of instabilities (1. regularly; 2. often; 3. sometimes; 4. never; 5. do not know)**

**Part 12 Environmental management**

**Q1. In the last 12 months, has your household been clearing farmland?**

- 1. Yes
- 2. No → *Skip to Q3*

**Q2. In the last 12 months, how has your household been environmentally managed?**

- 1. Sliced and burned
- 2. Sliced and accumulated

**Q3. How do you manage plant waste?**

- 1. Burned  Hectare
- 2. Accumulated  Hectare
- 3. Left naturally  Hectare

**Q4. How did your household do on Land preparation?**

- 1. Plow by animal labor
- 2. Plow by machineries
- 3. Not plow

**Q5. How did you improve the soil before planting rice??**

- 1. Plow cover the straw (Less than 30 days before planting)
- 2. Plow cover the straw (more than 30 days before planting)
- 3. Put the husk
- 4. Applied compost Fertilizer
- 5. Applied manure fertilizer
- 6. Applied fresh planted fertilizer
- 7. Not put anythings

**Q6. How did your household manage the waste from livestock?**

- 1. Keeping
- 2. Treated and separated
- 3. Left naturally

**Q7. What activities did your household use the waste from livestock?**

- 1. Left naturally
- 2. Used as fuel
- 3. Used for fertilizer
- 4. Used for feed the livestock
- 5. Others

**Thank you**

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