

# CREd Baseline Survey Report

Oudomxay Province (Namor, Hun and Xay Districts)

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## Executive Summary

The CRED baseline survey in Oudomxay Province (2023) covered 14 villages across Hun, Namor, and Xay districts, representing 2,373 households and a population of approximately 13,200 people. The baseline combines village-level administrative data with household-level resilience and well-being data, providing a comprehensive reference point for programme design and future monitoring.

Livelihoods across all districts remain strongly agriculture-based. Rice and maize dominate farming systems, complemented by livestock and selected cash crops such as sugarcane, tobacco, rubber, and vegetables. While livelihood activities are diverse, most households rely on multiple low-value activities rather than specialized or high-return production. Market engagement is weakly structured: middlemen are the primary buyers for most crops and livestock, while direct company linkages are limited to a narrow set of commercial crops. This constrains bargaining power, income stability, and incentives for productivity improvement.

Access to basic services such as electricity and roads is generally good, but important gaps remain. Many villages rely on multiple and often seasonal water sources, and infrastructure constraints-particularly roads, transport, and storage-limit market access and business development. Community responses to these constraints are largely short-term and self-managed, relying on collective labor and small contributions rather than durable solutions.

Climate change awareness is high, and all villages report exposure to recurring hazards, especially drought, flooding, landslides, and pest or disease outbreaks. Disaster impacts affect both households and infrastructure, yet preparedness capacity is uneven. Formal DRR plans and committees exist mainly in Hun District, while Namor and most of Xay lack structured risk management.

Household resilience scores show moderate strengths in income, access to services and information, agrobiodiversity, and community self-reliance. However, the weakest dimensions are market engagement, productivity, and access to productive resources. Gender equity remains a cross-cutting concern: while joint household decision-making is widely reported, women's leadership and influence in village institutions outside the Lao Women's Union are limited.

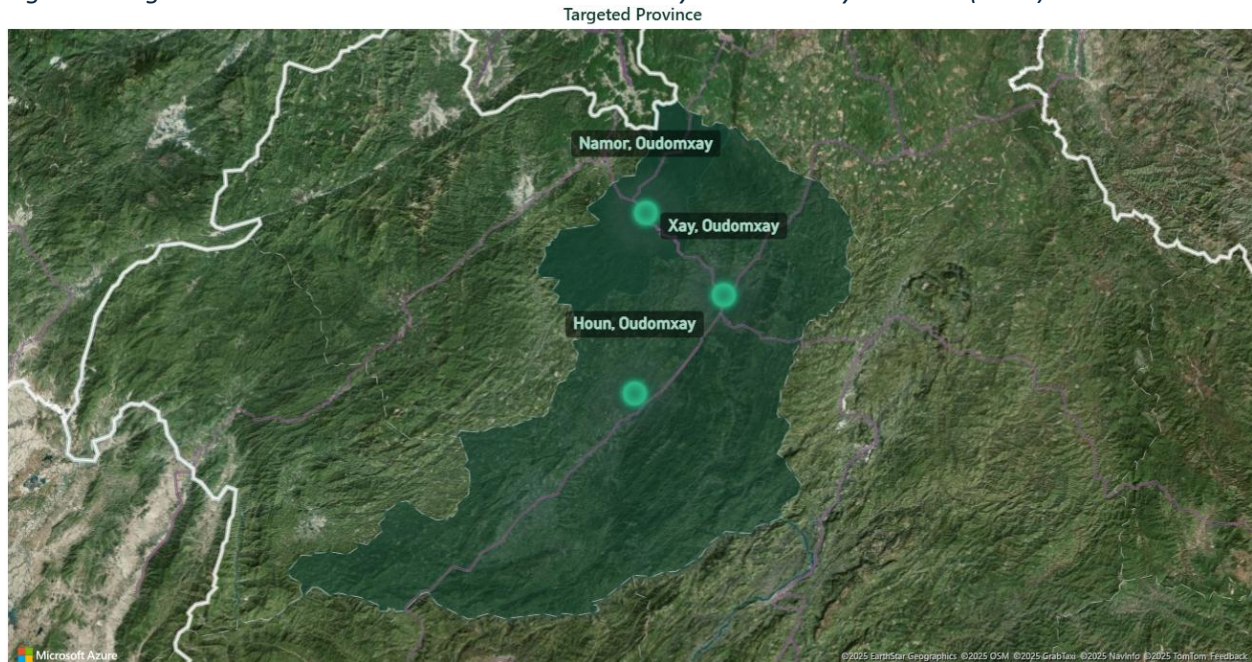
Overall, the baseline highlights the need for CRED to focus on strengthening market linkages, improving productivity through climate-resilient practices, expanding access to productive resources, and building practical disaster preparedness capacity, while ensuring gender-responsive and inclusive implementation.

## 1. Coverage and Survey Scope

The CRED baseline survey in Oudomxay Province was conducted in 2023 across 14 villages in Namor, Hun, and Xay districts, covering 2,373 households. Most findings in this report are based on village-level data collected through structured interviews with village authorities and community representatives, reflecting aggregated community conditions rather than individual households.

Section 18 (Household Resilience and Well-being Scores) is based on a separate household survey and presents self-reported household-level data. Household coverage varies by district, with Hun accounting for the largest share, followed by Namor and Xay, which has implications for outreach and implementation planning under CRED.

Figure 1 Targeted districts under the CRED baseline survey in Oudomxay Province (2023)



### **Methodological Note and Limitations**

*This baseline report uses two data sources: (i) village-level interviews with village authorities and community representatives, providing aggregated information on livelihoods, infrastructure, institutions, markets, and disaster exposure; and (ii) a household survey used only in Section 18 to capture self-reported resilience and well-being.*

*Village-level data provide a general picture of community conditions but may hide differences between households, while household-level data offer more detail but are not representative. The findings therefore serve as indicative baseline information for comparison, learning, and monitoring rather than precise measurement.*

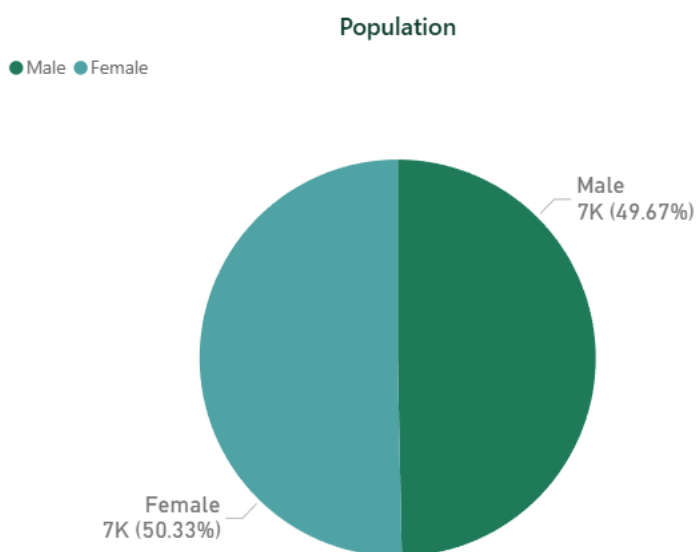
## 2. Population Structure

The surveyed villages in Oudomxay Province report a total population of 13,223 people, comprising 6,568 males (49.7%) and 6,655 females (50.3%) (Figure 2). The population structure is therefore broadly balanced by gender, with no significant demographic skew observed at baseline.

Population figures are based on aggregated village-level data reported by village authorities during the 2023 CRED baseline survey. Minor differences between male and female totals reflect normal demographic variation and do not indicate structural imbalances.

When considered alongside the total number of households covered (2,373 households), the data suggest an average household size of approximately 5.6 persons per household. This is consistent with rural household patterns observed in northern Lao PDR and indicates relatively large household units, which may imply higher dependency ratios and greater sensitivity to livelihood and climate-related shocks.

*Figure 2 Population by gender in surveyed villages, Oudomxay Province (CRED Baseline Survey, 2023)*



## 3. Village Structure and Administrative Configuration

### 3.1 Single vs. Combined Villages

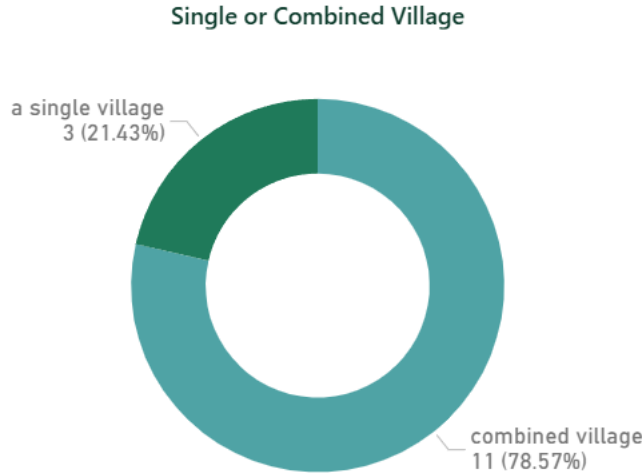
Of the 14 villages covered by the CRED baseline survey in Oudomxay Province, 11 villages (78.6%) are administratively classified as combined villages, while 3 villages (21.4%) are classified as single villages (Figure 3).

Combined villages consist of multiple sub-settlements administered under a single village authority. This administrative configuration implies that households are often geographically dispersed across different hamlets or settlement clusters within the same village unit.

The predominance of combined villages has important implications for CRED programme implementation. In such contexts, programme activities, information dissemination, and community engagement may require additional coordination efforts to ensure that interventions reach all sub-settlements, rather than only the village center. Combined village structures may also influence participation in village meetings and access to services, particularly for households located farther from administrative centers.

Overall, the village structure in Oudomxay Province suggests a need for inclusive and decentralized implementation approaches, especially in combined villages, to ensure equitable outreach and participation across all settlements.

Figure 3 Distribution of single and combined villages, Oudomxay Province (CRED Baseline Survey, 2023)



### 3.2 Access to Basic Infrastructure and Services

#### 3.2.1 Access to Roads, Education, Electricity, and Water

Baseline data from village-level reporting indicate that access to basic infrastructure and services in Oudomxay Province is generally favorable, though important gaps and variations persist across districts and villages.

Road access is relatively strong overall. The majority of surveyed villages report year-round road accessibility, particularly in Hun District. However, several villages in Namor and Xay districts report that roads are not accessible all year, indicating seasonal constraints that may affect mobility, access to markets, service delivery, and emergency response during the rainy season.

Education infrastructure is unevenly distributed across villages. Most villages report the presence of at least a primary school. A smaller number of villages, particularly in Hun and Namor districts, report having both primary and secondary schools, while several villages report no school within the village, requiring children to travel to neighboring communities to access education services. These differences may influence school attendance and household vulnerability, particularly in more remote locations.

Electricity access is reported in all surveyed villages, with near-universal household coverage. Most villages report coverage levels close to or at 100%, indicating that electricity availability is not a major structural constraint at baseline. High electricity coverage provides an enabling environment for CRED implementation, including communication, service delivery, and potential livelihood diversification.

Piped water supply systems are limited. Only a small number of villages, mainly in Namor District, report the presence of a piped water supply. The majority of villages rely on alternative water sources for domestic and productive use.

Figure 4 Access to basic infrastructure and services by village, Oudomxay Province (CRED Baseline Survey, 2023).

District	Village	Road Accessible All Year	School in Village	Electricity Available	% Households with Electricity	Piped Water Supply
Hun	Langcheng	Yes	Primary School	Yes	100%	No
	Naxiengdee1	Yes	<b>None</b>	Yes	97.7%	No
	Naxiengdee2	Yes	Primary and Secondary School	Yes	91.5%	No
	Sibounhueng1	Yes	Primary and Secondary School	Yes	100%	No
	Sibounhueng2	Yes	Primary and Secondary School	Yes	97.7%	No
	Sibounhueng3	Yes	Primary and Secondary School	Yes	~100%	No
Namor	Mainatao1	Yes	Primary School	Yes	~100%	<b>Yes</b>
	Mainatao2	Yes	Primary School	Yes	94.8%	No
	Namnyeun	<b>No</b>	Primary and Secondary School	Yes	100%	No
	Nasawang1	Yes	<b>None</b>	Yes	100%	<b>Yes</b>
	Nasawang2	Yes	Primary and Secondary School	Yes	83.3%	No
Xay	Houayam	Yes	Primary School	Yes	100%	No
	Moonmeang	<b>No</b>	Primary School	Yes	100%	No
	Naom	<b>No</b>	Primary School	Yes	100%	No

Note: Information is based on administrative data reported by village authorities during the CRED baseline survey.

### 3.2.2 Alternative Water Sources Used by Villages

In villages where piped water supply systems are absent or insufficient, households rely on a range of alternative water sources to meet domestic water needs. Baseline data from village-level reporting indicate that the use of multiple alternative water sources is widespread across Oudomxay Province.

As shown in Figure 5, gravity-fed water systems and surface water sources (rivers, streams, or lakes) are the most commonly reported alternative water sources across all three districts (Hun, Namor, and Xay). These sources are used by the majority of surveyed villages and represent the primary substitutes where centralized water systems are unavailable or unreliable.

Open shallow dug wells are also widely reported, particularly in Hun District, reflecting localized access to groundwater in certain villages. In addition, several villages report using bottled water purchased from vendors, indicating that households supplement local water sources when availability or water quality is a concern.

More temporary or coping-oriented options are also observed. Trucked water from vendors and rainwater collection are reported in a smaller number of villages, suggesting seasonal shortages or interruptions in

regular water supply. These sources function mainly as supplementary measures rather than permanent solutions.

More secure alternative infrastructure remains limited. Covered dug wells are reported in only a few villages, while boreholes (drilled wells) are reported in only one village, indicating minimal coverage of improved groundwater systems across the surveyed area.

Figure 5 Alternative water sources used by villages in the absence of piped water supply, by district, Oudomxay Province (CRED Baseline Survey, 2023).

Alternative Water Source	Hun (No. of villages)	Namor (No. of villages)	Xay (No. of villages)	Total Villages
Gravity-fed water system	5	2	3	10
River / stream / lake	5	2	3	10
Bottled water from vendor	4	2	3	9
Open dug well (shallow)	6	1	2	9
Trucked water from vendor	4	-	2	6
Rainwater	4	1	-	5
Covered dug well	2	-	1	3
Borehole (drilled well)	1	-	-	1

### 3.2.3 Drinking Water Sources and Water Supply

Baseline data indicate that villages in Oudomxay Province rely on multiple drinking water sources, reflecting differences in local infrastructure, groundwater availability, and seasonal reliability.

Village-level reporting shows that gravity-fed water systems and surface water sources (rivers, streams, or lakes) are the most widely used drinking water sources across the surveyed villages. These sources are reported in the majority of villages in all three districts (Hun, Namor, and Xay), indicating that drinking water access remains strongly dependent on natural and semi-formal systems.

Open shallow dug wells are also commonly reported, particularly in Hun District, suggesting localized access to groundwater where conditions allow. In addition, several villages report using bottled water purchased from vendors, indicating that households supplement local water sources when concerns exist regarding availability, convenience, or water quality.

More temporary or coping-oriented drinking water sources are also observed. Trucked water from vendors and rainwater collection are reported in a smaller number of villages, pointing to seasonal shortages or interruptions in regular supply. These sources function mainly as supplementary options rather than primary drinking water systems.

More secure infrastructure remains limited. Covered dug wells are reported in only a few villages, while boreholes (drilled wells) are reported in only one village, indicating minimal coverage of improved groundwater systems across the surveyed area.

The drinking water profile shows that access in Oudomxay Province is characterized by diversification rather than reliance on a single improved source. The widespread use of multiple drinking water sources suggests ongoing vulnerability to seasonal variation, climate-related stress, and potential water quality risks, which remain relevant considerations for resilience-oriented CRED interventions.

Figure 6 : Drinking water sources by district, Oudomxay Province (CRED Baseline Survey, 2023)

Drinking Water Source	Hun (No. of villages)	Namor (No. of villages)	Xay (No. of villages)	Total Villages
Gravity-fed water system	6	2	3	11
River / stream / lake	5	2	3	10
Open dug well (shallow)	6	1	2	9
Bottled water from vendor	4	2	3	9
Trucked water from vendor	4	-	2	6
Rainwater	4	1	-	5
Covered dug well	2	-	1	3
Borehole (drilled well)	1	-	-	1

#### 4. Village Establishment Period

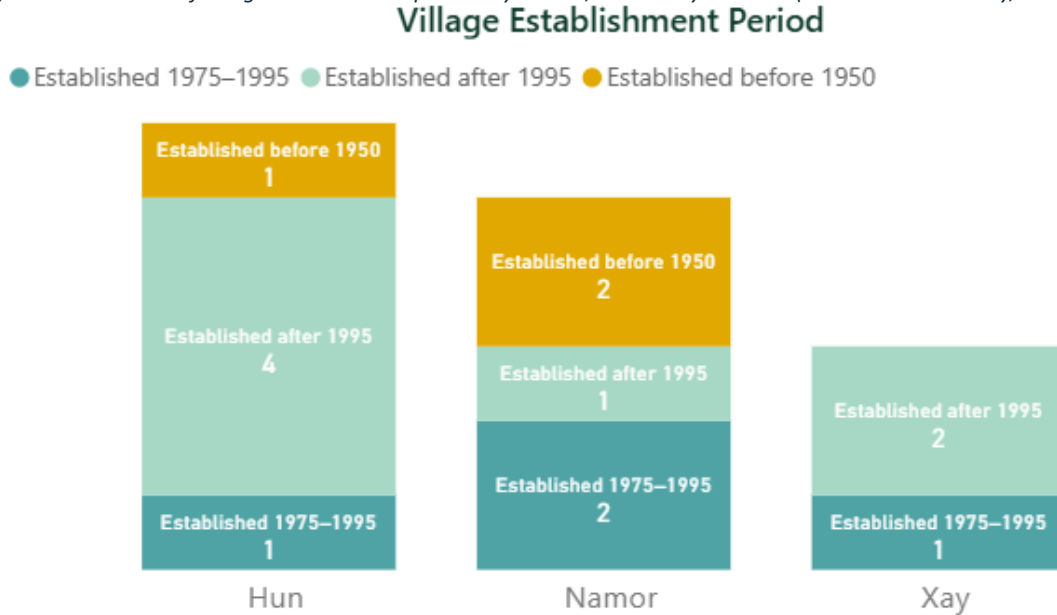
The baseline data show that villages in Oudomxay Province were established across different historical periods, reflecting varied settlement trajectories across districts (Figure 7).

Most surveyed villages were established after 1995, indicating relatively recent settlement and administrative formation. This pattern is most pronounced in Hun District, where the majority of villages fall into the post-1995 category, suggesting more recent village consolidation or relocation processes.

Villages established during the period 1975-1995 are also present across all three districts (Hun, Namor, and Xay), representing communities formed during earlier phases of national resettlement and administrative reorganization. These villages constitute a smaller but consistent share of the surveyed area.

A limited number of villages were established before 1950, primarily in Hun and Namor districts, reflecting older settlement histories in specific locations. These villages tend to represent longer-established communities with more entrenched land use patterns and institutional arrangements.

Figure 7 Distribution of village establishment periods by district, Oudomxay Province (CRED Baseline Survey, 2023).



## 5. Household Distribution by District and Village

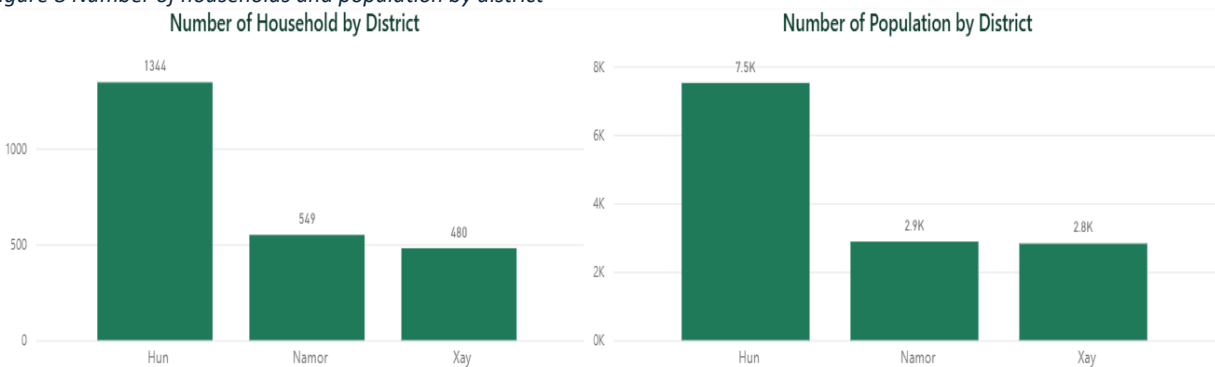
The CRED baseline survey in Oudomxay Province covers information related to 2,373 households and an estimated total population of 13,223 people across three districts: Hun, Namor, and Xay.

Household distribution varies significantly across districts. Hun District accounts for the largest share, with 1,344 households, representing more than half of all households covered by the baseline. Namor District includes 549 households, while Xay District covers 480 households, indicating comparatively smaller settlement sizes.

Population distribution mirrors this pattern. Hun District has the largest population, estimated at approximately 7,500 people, followed by Namor District with around 2,900 people, and Xay District with approximately 2,800 people.

When household and population figures are considered together, the data indicate an average household size of approximately 5.6 persons per household across Oudomxay Province. Average household size is relatively consistent across districts, ranging from about 5.3 persons in Namor to 5.8 persons in Xay, with Hun District at approximately 5.6 persons per household.

Figure 8 Number of households and population by district



## 6. Household Economic Categorization

### 6.1 Household Economic Profile

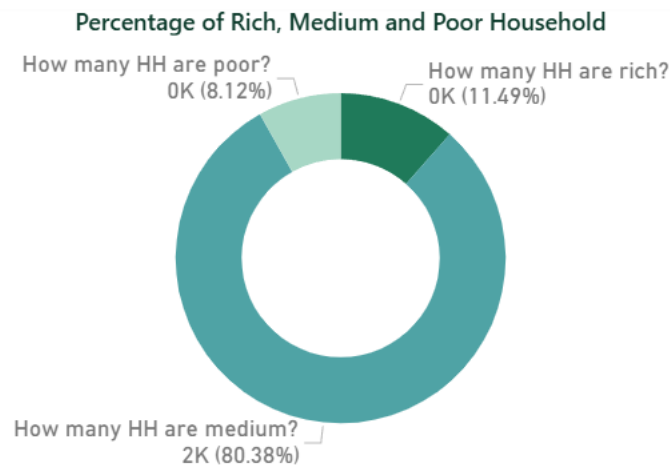
Household economic categorization data from the CRED baseline survey indicate that medium-income households overwhelmingly dominate the economic profile in Oudomxay Province. Based on aggregated village-level reporting, approximately 80.4% of households are classified as medium, while 11.5% are classified as rich and 8.1% as poor (Figure 9).

This distribution suggests that most households maintain moderate livelihood conditions, but remain vulnerable to shocks related to climate variability, agricultural production, health, and market access. Although the proportion of households classified as poor is relatively limited, this group represents a segment with heightened vulnerability and limited capacity to absorb shocks.

The presence of a smaller proportion of rich households indicates some degree of economic differentiation across villages. However, the overall structure is characterized more by a large concentration of medium-income households than by pronounced polarization between wealth and poverty.

Household economic categorization figures are based on administrative classifications reported by village authorities and reflect relative economic status within the local context. As such, they should be interpreted as indicative baseline measures rather than precise estimates of income or consumption.

Figure 9 Percentage distribution of rich, medium, and poor households (n = 1,090), Oudomxay Province (CRED Baseline Survey, 2023)



### 6.2 District-Level Comparison of Household Economic Categories

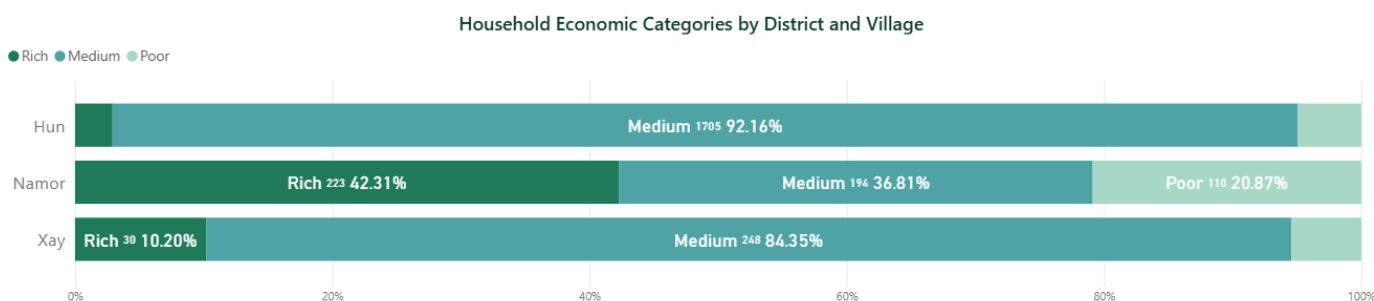
Household economic composition varies substantially across districts in Oudomxay Province, revealing distinct patterns of vulnerability and economic differentiation (Figure 10).

- Hun District is characterized by a highly concentrated economic structure, with medium-income households accounting for the overwhelming majority (92.2%). Only small shares of households are classified as rich or poor. This pattern suggests broadly similar livelihood conditions across villages, with limited economic polarization but widespread exposure to shared risks related to agriculture, climate variability, and market access.
- In contrast, Namor District displays the highest level of economic differentiation among the three districts. Rich households account for 42.3%, while 36.8% are classified as medium and 20.9% as poor. This distribution indicates pronounced internal inequality, with a sizeable vulnerable

population coexisting alongside relatively better-off households. Namor therefore emerges as a district with both higher opportunity and higher risk, requiring careful targeting to ensure that CRED interventions reach poorer households while supporting inclusive growth.

- Xay District shows an intermediate profile. The majority of households (84.4%) fall into the medium category, while 10.2% are classified as rich and a smaller share as poor. This structure indicates generally stable livelihood conditions, with some degree of differentiation but less pronounced inequality than in Namor District.

Figure 10 Household economic categories (rich, medium, poor) by district, Oudomxay Province (CRED Baseline Survey, 2023).



## 7. Livelihood Activities and Place of Work

### 7.1 Main and Secondary Livelihood Activities by Village

Village-level baseline data indicate that livelihoods in Oudomxay Province are diverse and multi-activity, with dominant livelihood activities varying across villages and districts.

#### Hun District

In Hun District, dominant livelihoods are primarily agriculture- and labor-based. Rice cultivation and corn production are frequently reported as main livelihood activities across villages, confirming their central role in food security and income generation. Cash crop production also appears as a main activity in some villages, indicating engagement with market-oriented agriculture.

In addition, factory employment and labor migration (“go abroad”) are reported as main occupations in several villages, highlighting the importance of wage labor and migration as income sources.

#### Namor District

Livelihoods in Namor District are characterized by a strong reliance on agriculture and local economic activities. Rice cultivation is consistently reported as a main livelihood activity across all villages, underscoring its foundational role. Corn and cash crop production are more commonly reported as secondary activities, suggesting supplementary income rather than primary livelihoods.

Trading activities emerge as a main livelihood in several villages, indicating relatively stronger engagement in commerce and local markets compared to other districts. Labour migration (“go abroad”) is also reported as a main activity in some villages. As in other districts, government employment is present in all villages but involves only a small number of people, serving as a limited yet stable income source.

#### Xay District

In Xay District, dominant livelihoods combine rice-based agriculture with wage employment. Rice cultivation is consistently reported as a main occupation, while corn and cash crop production are mainly secondary activities.

Factory employment and private employment are reported as main livelihood activities in some villages, reflecting stronger engagement with non-farm wage labor

Figure 11 Main and secondary occupations by village in Namor

District		Household Occupation				
Occupation		Namor				
		Mainatao1	Mainatao2	Namnyeun	Nasawang 1	Nasawang 2
Cash crop			Secondary	Secondary	Secondary	Secondary
Corn		Secondary	Secondary			Secondary
Garden(Vegetable)		Secondary	Secondary	Secondary	Secondary	Secondary
Go to abroad		Main	Main	Main		Main
Government officer		Main	Main	Main	Main	Main
Hired labourer/worker		Secondary	Secondary			
Private employee		Secondary				
Rice		Main	Main	Main	Main	Main
Trader		Main		Main	Secondary	Secondary

Figure 12 Main and secondary occupations by village in Hun

District		Household Occupation					
Occupation		Hun					
		Langcheng	Naxiengdee1	Naxiengdee2	Sibounhueang1	Sibounhueang2	Sibounhueang3
Factory		Main	Secondary	Secondary			
Cash crop		Main		Main	Secondary		Secondary
Corn		Main	Secondary	Main	Main	Main	Main
Garden(Vegetable)		Secondary	Secondary	Secondary	Secondary	Secondary	Secondary
Go to abroad		Main	Secondary	Main		Main	
Government officer		Main	Main	Main	Main	Main	Main
Hired labourer/worker		Secondary	Secondary	Secondary	Secondary	Secondary	
Migrant labourer and back to home town because of COVID		Secondary					
Rice		Secondary	Main	Main	Secondary	Main	Secondary
Trader		Secondary		Secondary	Secondary	Secondary	Secondary
Worker		Secondary		Secondary	Secondary	Secondary	Secondary

Figure 13 Main and secondary occupations by village in Xay

District Occupation	Household Occupation		
	Xay		
	Houayyam	Moonmeang	Naom
Factory			Main
Cash crop		Secondary	Secondary
Corn		Secondary	Secondary
Garden(Vegetable)		Secondary	Secondary
Go to abroad		Secondary	
Government officer	Main	Main	Main
Hired labourer/worker	Secondary		
Migrant labourer and back to home town because of COVID		Secondary	
Private employee	Main	Secondary	Secondary
Rice		Main	Main
Trader		Secondary	Secondary
Worker	Secondary	Main	Secondary

Note: “Main” and “Secondary” indicate dominant and supplementary livelihood activities as reported at village level by village authorities. The table does not represent the proportion of households engaged in each activity, and the presence of an activity does not imply that it involves a large share of households

## 7.2 Livelihood Activities and Place of Work

Livelihood activities in Oudomxay Province are carried out across multiple geographic levels, including within villages, district centers, provincial towns, and other provinces, reflecting both main and secondary income strategies.

Agricultural activities are predominantly village-based. Rice cultivation, which constitutes a main livelihood activity across all districts, is carried out within village boundaries and nearby agricultural land. Corn production, whether reported as a main or secondary activity, is likewise conducted mainly within village areas or adjacent fields, along with cash crops and vegetable gardening, which support household food security and income.

In contrast, non-farm livelihood activities are largely located outside the village. Factory employment, reported as both a main and secondary activity in some villages, is typically undertaken in district centers, provincial towns, or other provinces, including Vientiane. This reflects the importance of commuting and temporary migration for accessing wage employment.

Casual wage labor and hired work are carried out both within villages-particularly during peak agricultural periods and outside villages in district or provincial locations. Trading activities operate mainly within villages and nearby district markets, with some engagement beyond the district level

## 7.3 Farming System Composition

Baseline data indicate that farming systems in Oudomxay Province are mixed crop-livestock systems, with variation across districts and villages.

Cropping systems

Corn and rice are the most widely practiced crops across all districts. Corn cultivation is reported in nearly all villages, particularly in Hun District, where it reaches close to universal coverage. Rice farming is also widespread and remains a core component of household food security across the province.

Other crops are practiced more selectively. Rubber is concentrated mainly in Hun District, reflecting earlier investment patterns and land suitability. Job’s tears, sugarcane, tobacco, fruit, and vegetables appear in specific villages, particularly in Namor and Xay districts, indicating localized diversification rather than province-wide adoption.

Overall, cropping systems combine staple food production with selected commercial crops, with diversification occurring unevenly across locations.

#### Livestock systems

Livestock rearing is common across all surveyed villages. Poultry is reported in nearly all villages and represents the most widespread livestock activity. Pigs and goats are also common, though with notable variation in prevalence between villages.

Cattle and buffalo are present in many villages, particularly in Namor and Xay districts, reflecting their role in asset accumulation, draft power, and livelihood security. Fish farming is practiced at a smaller scale and only in a limited number of villages.

Figure 14 Crop and livestock activities by village (% of households)

Farming System															
Category	Crops									Livestock					
District	Corn	Fruit	Job's tear	Other	Rice	Rubber	Sugarcane	Tobacco	Vegetable	Buffalo	Cow	Fish	Goat	Pig	Poultry
<b>Hun</b>															
Langcheng	100%	4%			20%	39%				1%	20%		15%	15%	100%
Naxiengdee1	100%				100%					0%	94%		7%	100%	100%
Naxiengdee2	34%		66%		100%					0%	29%		2%	67%	100%
Sibounhueang1	96%				16%					0%	18%		8%	61%	96%
Sibounhueang2	98%				75%				3%	2%	59%	9%	22%	26%	43%
Sibounhueang3	100%				48%					0%	5%		24%	51%	62%
<b>Namor</b>															
Mainatao1	100%		100%		100%					10%	36%		0%	0%	100%
Mainatao2	47%				100%			49%		5%	73%		10%	31%	100%
Namnyeun	0%				99%		39%	30%		1%	6%		3%	21%	100%
Nasawang1					100%			19%	6%	11%	89%		3%	0%	100%
Nasawang2	0%				90%					1%	60%		5%	43%	83%
<b>Xay</b>															
Houayyam	19%		19%		13%					0%	12%		9%	31%	100%
Moonmeang	77%				104%					0%	20%		2%	68%	100%
Naom	104%			21%	104%					1%	79%		5%	81%	100%

Note: Percentages indicate the share of households reporting engagement in each activity at village level and do not represent production volume or income contribution.

## 8. Key Household Assets

Across the surveyed villages, farmers consistently identified agricultural land and livestock as their most valuable assets. The assets most frequently cited include paddy land, upland fields, garden land and livestock.

Land used for crop production particularly rice fields and upland plots represents the core productive asset for farming households, underpinning both food security and income generation. Livestock, including cattle, buffalo, pigs, and poultry, are valued as sources of income, savings, and risk buffering.

In some villages, respondents also highlighted agricultural infrastructure, such as access paths or roads to production areas, and fencing, as important assets that support farming activities and protect crops and animals.

## 9. Sources of Agricultural Knowledge and Learning

Village-level responses indicate that farmers in Oudomxay Province obtain agricultural and livestock information primarily through government extension services, most commonly the District Agriculture and Forestry Office (DAFO) and related district/provincial agriculture offices. These services are repeatedly cited as the main channel for technical guidance on livestock raising and general farming practices.

Several villages describe extension support as being delivered through training and outreach, including visits by agriculture staff and practical guidance on livestock techniques. Respondents specifically reference livestock management techniques and animal health support, including training linked to veterinary practices, disease prevention, and feeding practices.

In addition to formal sources, villages report informal learning pathways, including farmers applying knowledge independently (“learning-by-doing”) after receiving basic guidance. These informal channels are reported as complementary to government extension support rather than replacing it.

### 9.1 Ongoing Development Projects at Village Level

Village-level responses indicate the presence of ongoing development projects in a subset of surveyed villages in Oudomxay Province, covering multiple sectors including agriculture, education, environment, health, livelihood, nutrition, and other support (Figure 15).

Across districts, agriculture- and health-related projects are among the most frequently reported categories, indicating that external engagement at village level commonly focuses on production and basic services. Education- and environment-related activities are reported in a smaller number of villages, while livelihood and nutrition activities appear in selected locations only, suggesting limited coverage of these sectors.

Several villages report more than one sector operating concurrently, while others report only one category of project activity or “other” forms of support. The presence and sectoral mix of projects therefore varies notably by village and district, providing an uneven baseline of external support across the surveyed area.

Figure 15 Projects operating in the village

**What project are going on in this village?**

District	Agriculture	Education	Environment	Health	Livelihood	Nutrition	Other
<b>Hun</b>							
Langcheng	Agriculture		Environment				Other
Naxiengdee2		Education		Health			
Sibounhueang1							Other
Sibounhueang2		Education	Environment	Health	Livelihood	Nutrition	Other
Sibounhueang3							Other
<b>Namor</b>							
Mainatao1					Livelihood	Nutrition	
Mainatao2	Agriculture			Health		Nutrition	
Namnyeun	Agriculture	Education		Health			
Nasawang1	Agriculture			Health			
Nasawang2	Agriculture			Health			
<b>Xay</b>							
Houayyam							Other
Moonmeang							Other
Naom	Agriculture	Education				Nutrition	Other

## 10. Local Economy, Market Access and Trading Conditions

### 10.1 Products Available and Trading Arrangements

Across Hun, Namor, and Xay districts, household production is concentrated in primary agriculture and livestock, with reported products including rice, maize (corn), Job’s tears, vegetables and fruit, pumpkin, banana, rubber, sugarcane, tobacco, broomgrass, Amomum spp., and livestock. This confirms strong dependence on farm-based livelihoods across all surveyed villages.

Across all districts, middlemen are the dominant first point of sale. Staple crops (corn and rice) and livestock products are sold almost exclusively through middlemen in nearly all villages, indicating limited direct market access for the majority of households.

In Hun District, most products-particularly corn, rice, Job’s tears, livestock, and poultry-are marketed through middlemen. Company buyers are linked only to a narrow set of commercial crops, notably rubber, banana, pumpkin, and some vegetables, while village collectors play a minor and highly localized role.

In Namor District, the same pattern applies. Rice, corn, broomgrass, Amomum spp., and livestock are sold primarily to middlemen, while sugarcane, tobacco, and pumpkin are consistently linked to company buyers, reflecting more structured value chains for these crops.

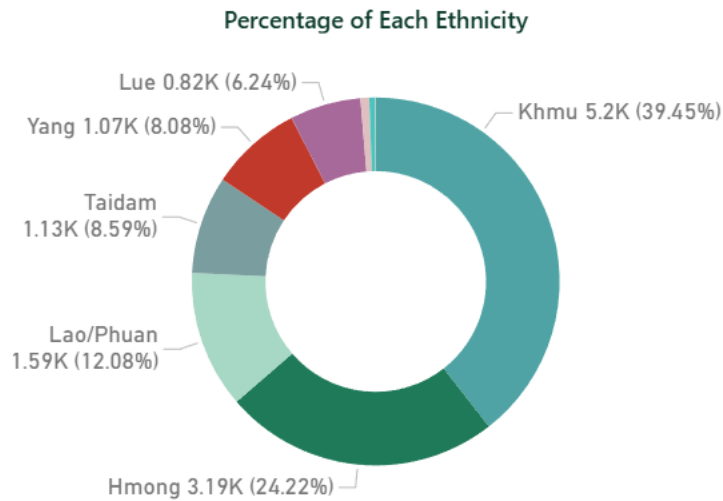
In Xay District, product diversity is lower, but marketing arrangements are similar. Corn and cattle are sold mainly through middlemen, while rubber and selected products are sold directly to companies. Village collectors appear only in isolated cases and do not represent a major marketing channel.

## 11. Ethnic Composition

### 11.1 Ethnic Composition at Province Level

The surveyed population is ethnically diverse, with Khmu households forming the largest group (39.5%), followed by Hmong (24.2%) and Lao/Phuan (12.1%). Taidam (8.6%) and Yang (8.1%) represent smaller but still significant shares, while Lue households account for 6.2% of the population.

Figure 16 Percentage distribution of ethnic groups among households surveyed, Oudomxay Province (CREd Baseline Survey, 2023).



### 11.2 Ethnic Composition at Village Level

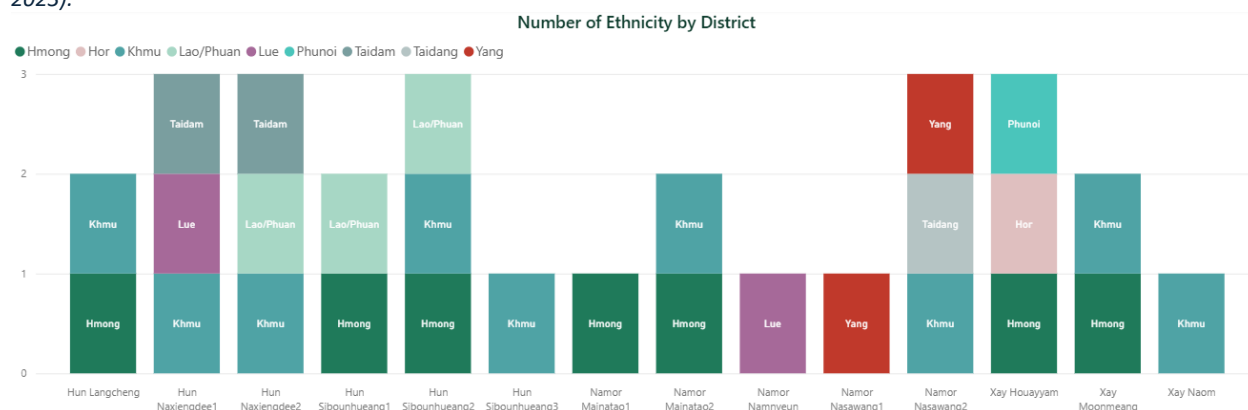
District-level data show clear variation in ethnic diversity, driven by the aggregation of village-level settlement patterns. Hun District exhibits the highest ethnic diversity, with villages reporting up to three ethnic groups, including Hmong, Khmu, Lao/Phuan, Taidam, and Lue. Namor District shows moderate diversity, with most villages reporting one to two ethnic groups, and limited presence of Lue and Yang in specific locations. Xay District is comparatively more homogeneous, dominated by Hmong and Khmu, with fewer villages reporting additional ethnic groups.

Overall, the figure confirms that ethnic diversity is unevenly distributed across districts, reflecting localized settlement histories rather than widespread ethnic mixing.

Figure 17 Number of ethnic groups reported per village (village-level presence), Oudomxay Province (CREd Baseline Survey, 2023).



Figure 18 Number of ethnic groups reported per district (village-level presence), Oudomxay Province (CRED Baseline Survey, 2023).



## 12. Village Institutions and Local Governance Structures

Baseline findings confirm that core village governance and community institutions are present in all surveyed villages, including village authorities, mass organizations (Lao Women’s Union and Lao Youth Union), village security structures, and village elder groups. This indicates that formal coordination and representation structures are in place across the programme area.

However, women’s participation within these structures remains limited in influence. While women are consistently represented within the Lao Women’s Union-including in leadership roles-their presence in other village institutions is minimal and largely non-decision-making. Female leadership outside the Lao Women’s Union is rare, and women are largely absent from village authority and security-related structures.

At household level, joint decision-making between husbands and wives is reported across all villages. This suggests shared involvement in household decisions at baseline; however, the data reflect reported arrangements rather than actual decision-making power, which may vary by decision type and household context.

## 13. Local Economic Activities and Business Environment

### 13.1 Business Activities at Village Level

Agriculture, forestry and fishing remain the most commonly reported business type, present in 14 villages, confirming the continued dominance of agriculture-based economic activity. Wholesale and retail trade is also widespread, reported in 10 villages, highlighting the importance of small-scale trading and local markets in supporting household consumption and livelihoods.

Several service-oriented businesses are reported across districts, including repair of motor vehicles and motorcycles and transportation, each reported in six villages. These activities reflect higher mobility needs and connectivity within and between districts. Accommodation and food services, health centres, pharmacies, and post offices are also present in multiple villages, indicating relatively stronger access to basic services.

A small number of villages report manufacturing or factory-type activities, drinking water factories, electricity supply, and mining, though these remain limited in scale and coverage.

Figure 19 Business Activities Operating at Village Level

Type of Business	Hun	Namor	Xay	Total
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Accommodation and food service activities	2	1	-	3
Agriculture, forestry and fishing	6	5	3	14
Drinking water factory	2	-	-	2
Electricity, gas and air conditioning supply	1	-	-	1
Entertainment and relaxation	1	-	-	1
Health centre	2	-	-	3
Manufacturing / factory	1	-	-	1
Mining	1	-	-	1
Other	2	1	2	5
Pharmacy	2	-	-	2
Post office	2	-	-	2
Repair of motor vehicles and motorcycles	2	2	2	6
Transportation	4	1	1	6
Wholesale and retail trade	3	4	3	10
Total	31	15	11	57

### 13.2 Infrastructure Constraints Affecting Business Development

Infrastructure constraints are widespread across the surveyed villages in Hun, Namor, and Xay districts and constitute a key structural barrier to local business development. The most frequently reported constraints relate to road conditions, transport access, and storage infrastructure, all of which directly affect the movement, preservation, and marketing of agricultural products.

In Hun District, villages report a combination of road and transport constraints, particularly during the rainy season, which limits access to production areas and markets despite relatively better overall connectivity. Namor District faces similar challenges, with road access and transport conditions emerging as the primary bottlenecks for business operations and product distribution. In Xay District, infrastructure constraints are more pronounced, with poorer road conditions and limited storage facilities further restricting market access and increasing post-harvest losses.

### 13.3 Community Responses to These Problems

Village responses to infrastructure constraints are predominantly short-term and community-led. Across the surveyed villages, actions rely mainly on collective labor and limited self-financing, rather than structured or external support.

The most common response is community mobilization to repair roads and access paths, particularly during the rainy season. Villagers contribute labor to fill damaged sections, clear routes, and carry out basic maintenance. In some cases, villages pool funds to hire machinery or use tractors and trucks to temporarily restore access to production areas.

Responses to water and irrigation constraints include basic community-led measures, such as digging canals, constructing simple diversion structures, and organizing informal water-sharing arrangements. A small number of villages report the establishment of local water management committees, although many water supply and irrigation problems remain unresolved due to technical and resource limitations.

In several villages, households report coping adjustments, including shifting from rice to maize or vegetables and relying on rainfall rather than irrigation. These responses address immediate constraints but do not constitute long-term solutions.

## 14. Land Use Planning and NTFP Management

Baseline data indicate that community land use planning is fully established across the surveyed villages: all 14 villages report having a community land use plan. Villages also describe community involvement in plan development, most commonly through village meetings, consultations, and collective discussion. In contrast, NTFP management planning is not universal. While 12 of 14 villages report having an NTFP management plan, two villages in Xay District (Moonmeang and Naom) report no NTFP plan, indicating localized gaps in formal NTFP governance.

Figure 20 Disaster Risk Reduction (DRR) and NTFP Management Plans by District and Village

District	Village	Land Use Planning in Place	NTFP Management Plan in Place
Hun	Langcheng	Yes	Yes
	Naxiengdee1	Yes	Yes
	Naxiengdee2	Yes	Yes
	Sibounhueang1	Yes	Yes
	Sibounhueang2	Yes	Yes
	Sibounhueang3	Yes	Yes
Namor	Mainatao1	Yes	Yes
	Mainatao2	Yes	Yes
	Namnyeun	Yes	Yes
	Nasawang1	Yes	Yes
	Nasawang2	Yes	Yes
Xay	Houayyam	Yes	Yes
	Moonmeang	Yes	<b>No</b>
	Naom	Yes	<b>No</b>

## 15. Climate Change Awareness, Hazards, and Disaster Impacts

### 15.1 Awareness of Climate Change

A high level of awareness of climate change across the surveyed villages. Almost all villages report having heard about climate change and believe that it is affecting their communities. Only one village (Mainatao1, Namor District) reports not having heard about climate change, although it still reports experiencing its impacts.

Villages consistently describe observable environmental changes, including irregular rainfall patterns, delayed or early rains, drought, flooding, and changes in temperature. Respondents frequently link these changes to negative impacts on agricultural production, such as reduced rice yields, increased crop losses, water shortages, and rising pest and disease incidence.

Across all three districts, climate change is primarily perceived through direct livelihood impacts, particularly on farming activities and water availability. The consistency of responses across villages

suggests that climate change is not understood only as an abstract concept, but as a lived and practical reality affecting daily agricultural practices and household well-being.

## 15.2 Types of Hazards Experienced

Baseline data show that villages across Oudomxay Province are exposed to multiple and recurring natural hazards, often affecting the same villages simultaneously. The most commonly reported hazards are drought, flooding, landslides, and pest or disease outbreaks, indicating widespread climate- and environment-related risks.

Drought and flooding are reported in almost all surveyed villages across Hun, Namor, and Xay districts, reflecting increasing rainfall variability and water stress. These hazards directly affect agricultural production, particularly rice and upland crops, and disrupt access to fields and markets.

Landslides are frequently reported, especially in villages with poor road conditions and sloping terrain, further compounding access and transport constraints. Pest and disease outbreaks are reported in nearly all villages, highlighting growing pressure on both crops and livestock.

More localized hazards are also observed. Destructive storms are reported in several villages across all districts, while frost is reported mainly in higher-altitude villages, particularly in Namor and Xay districts. Uncontrolled fires are reported only in one village, indicating a limited but present risk.

Figure 21 Types of Hazards Experienced by Village (Past Years)

District	Village	Destru ctive Storm	Drought	Flood	Frost	Landslid e	Pest / Disease Outbreak	Uncontro lled Fire
Hun	Langcheng	-	✓	-	-	✓	✓	-
	Naxiengdee1	✓	✓	✓	-	✓	✓	✓
	Naxiengdee2	✓	✓	✓	-	✓	✓	-
	Sibounhueang1	✓	✓	✓	-	✓	✓	-
	Sibounhueang2	✓	✓	✓	-	✓	✓	-
	Sibounhueang3	✓	✓	✓	-	✓	✓	-
Namor	Mainatao1	-	✓	✓	-	-	✓	-
	Mainatao2	✓	✓	✓	✓	✓	✓	-
	Namnyeun	-	✓	✓	✓	✓	✓	-
	Nasawang1	-	-	✓	-	✓	✓	-
	Nasawang2	-	✓	✓	-	✓	✓	-
Xay	Houayyam	-	✓	-	-	-	✓	-
	Moonmeang	✓	✓	✓	-	✓	✓	-
	Naom	-	✓	-	✓	-	✓	-

### 15.3 Occurrence of Disasters and Affected Households (Past Three Years)

All surveyed villages report recent disasters affecting both households and village infrastructure. The scale of impact varies widely, from fewer than 10 households in some villages to over 300 households in the most affected locations.

Hun District records the highest impacts, with several villages reporting increased damage compared to previous years, indicating rising disaster severity. Namor District reports fewer affected households overall, though some villages note worsening impacts. In Xay District, while most villages report lower impacts than in previous years, the absolute number of affected households remains high.

Across all districts, responses are largely reactive, relying on community labor and immediate repairs. Village authorities and local government are the main sources of support, with limited involvement from other actors.

## 15.4 Disaster Risk Reduction (DRR) Planning and Institutional Capacity

The baseline data show uneven DRR institutional capacity across districts. In Hun District, all surveyed villages report having an established DRR plan and committee, with most plans formed between 2013 and 2019. Reported activities focus on basic preparedness and risk reduction measures, including community awareness, road and drainage maintenance, and limited preventive actions before the rainy season.

In contrast, none of the villages in Namor District report having a DRR plan or committee. Similarly, in Xay District, only one village (Naom) reports having a DRR plan and committee, established in 2022, while the remaining villages report no formal DRR structures.

## 16. Perceived Changes Over Time and Well-being Trends

Across the surveyed villages, respondents consistently report that living conditions have improved compared to earlier generations. Key positive changes include better housing quality, with more permanent houses replacing traditional structures, improved road access, wider use of motorcycles, cars, and agricultural machinery, and expanded access to electricity. These improvements have reduced physical hardship and increased mobility year-round.

Livelihood systems have also shifted. Villagers report increased engagement in commercial agriculture, particularly maize, sugarcane, tobacco, vegetables, and livestock. Improved market access and the presence of traders and companies have enabled households to generate cash income, allowing investments in housing, transport assets, education, and basic household savings. Access to schools and health facilities has improved, contributing to better education outcomes and health conditions.

At the same time, respondents highlight negative environmental changes. Forest cover and wildlife availability have declined significantly, limiting traditional forest-based livelihoods. Climate variability is widely reported, with irregular rainfall, prolonged droughts, and water shortages affecting rice and maize production. Reduced water availability during critical months has increased production risks and food insecurity for some households.

## 17. Perceived Major Problems

Across all surveyed villages, health-related problems dominate, particularly animal disease (13 reports), followed by human disease (8) and human health issues (7). This underscores the strong linkage between livestock health and household well-being and the relevance of One Health approach.

Robbery is also a notable concern, reported 9 times, indicating persistent security issues in several villages. Other reported problems (6) are limited and include plant disease and localized issues.

By district, Hun records the highest number of problems (20), followed by Namor (16) and Xay (10). Overall, the pattern highlights systemic vulnerabilities related to health, livestock, and security, which remain key constraints to household resilience at baseline.

Figure 22 Perceived Major Problems by District and Village

District	Human Disease	Animal Disease	Human Health	Animal Health	Other	Robbery	Total
Hun	4	5	2	2	2	5	20
Namor	3	5	4	0	2	2	16
Xay	1	3	1	1	2	2	10
Total	8	13	7	3	6	9	46

## 18. Household Resilience and Well-being Scores

### 18.1 Overview of CRED Household Score Dimensions

The CRED household resilience and well-being scores are composite indicators derived from the household survey to capture key dimensions of livelihood resilience and vulnerability at baseline. The framework covers nine dimensions: income; access to services and information; agrobiodiversity; community self-reliance; gender equity; disaster exposure and preparedness; access to productive resources; productivity; and market engagement.

The scores provide a comparative profile of household resilience across dimensions and serve as a baseline reference for programme prioritization and future monitoring under the CRED programme.

### 18.2 Results: Average Scores by Dimension

Baseline results show clear variation across resilience dimensions (Figure 23). Relatively higher scores are observed for access to services and information (3.25), income (3.07), and agrobiodiversity ( $\approx 3.4$ ), indicating diversified livelihood systems and moderate access to services and knowledge.

Community self-reliance (2.99) and gender equity (2.68) fall around the mid-point, suggesting partial collective capacity and shared household decision-making, but with remaining gaps. The disaster score (2.64) reflects exposure to climate and hazard risks alongside limited preparedness.

By contrast, productivity (2.08), market engagement (1.80), and access to productive resources (1.34) record the lowest scores, pointing to structural constraints affecting production efficiency, asset access, and market integration

Figure 23 Average household resilience and well-being scores by dimension (CRED Household Survey, baseline).  
Spider GEM



### 18.3 Interpretation: Strengths, Gaps, and Implications for CRED

The resilience profile indicates moderately stable livelihood foundations combined with significant structural constraints. Households are actively engaged in agriculture and diversified activities, have some access to services and information, and report a degree of community cohesion. These strengths provide entry points for behaviour change and collective action under CRED.

At the same time, very low scores for market engagement, productivity, and access to resources highlight systemic barriers that limit income growth despite widespread agricultural participation. Limited buyer linkages, weak bargaining power, and low production efficiency remain key constraints. Disaster-related scores further confirm ongoing exposure to climate risks with limited preparedness capacity.

### 19. Key Baseline Implications for CRED

The baseline confirms that livelihoods across Oudomxay Province remain strongly agriculture-dependent, with limited diversification into non-farm activities. Local economies are dominated by primary production and small trading, while value-adding and service-based activities remain scarce. Market access is weakly structured: middlemen are the dominant first buyers for most crops and livestock across all districts, and direct company linkages are limited to a small number of commercial crops. This constrains price negotiation, income stability, and incentives for productivity improvement.

Infrastructure constraints-particularly road and transport conditions, storage facilities, and localized water and irrigation limitations-continue to limit business development and market participation. These

constraints interact with high exposure to climate and environmental hazards, including drought, flooding, landslides, and pest or disease outbreaks. Although all villages report recent disaster impacts, preparedness and institutional capacity are uneven. Hun District reports established DRR plans and committees, while Namor has none and Xay only one, highlighting a major gap in risk management.

Household resilience scores reinforce these findings. While households show moderate strengths in access to services and information, income, and agrobiodiversity, the weakest dimensions are market engagement, productivity, and access to productive resources. Together, these results indicate that CRED should prioritize interventions that strengthen market linkages, improve productivity through climate-resilient practices, expand access to productive resources, and build practical disaster preparedness capacity. Gender-responsive approaches are essential, given limited female leadership outside the Lao Women's Union, to ensure equitable and inclusive programme outcomes.