

CRED Baseline Survey Report

Xiengkhouang Province (Paxay and Phoukoud Districts)

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Executive Summary

This report presents the findings of the CRED baseline survey conducted in Xiengkhouang Province, covering two districts (Paxay and Phoukoud) and four villages: Nakeu, Namka, Langchong, and Namsam. The survey covered 318 households, representing an estimated population of 1,834 people, and establishes a reference point for monitoring livelihoods, resilience, and vulnerability under the CRED programme.

The surveyed population displays a balanced gender structure, with no significant demographic imbalances observed at baseline. Most villages are administratively classified as combined villages, meaning that several sub-settlements fall under a single village unit. This has implications for coordination, information flow, and the delivery of community-based interventions.

Access to basic infrastructure is generally strong across all villages. Year-round road access, electricity, and piped water systems are reported everywhere, with household electricity coverage near universal. Nevertheless, households continue to rely on multiple drinking water sources, including rivers and streams, suggesting that water reliability and safety remain relevant concerns. Access to education services is uneven, with Nakeu village lacking a school and households relying on facilities outside the village.

Village size varies considerably, with Namka and Langchong substantially larger than Nakeu and Namsam. These differences influence service needs and the scale of community engagement required. Economically, most households fall into the medium category (69.15%), followed by rich (20.40%) and poor households (10.45%). While Phoukoud District shows relatively homogeneous economic conditions, Paxay District displays greater differentiation, particularly in Namka village, pointing to uneven vulnerability across locations.

Livelihoods are predominantly agriculture-based in all surveyed villages. Farming is the main occupation, complemented by government employment and a range of secondary activities, including hired labour, plantation work, trading, factory work, and migration. Household assets are largely land- and livestock-based, with cattle and buffalo identified as key productive assets. At baseline, all agricultural products are sold through middlemen, indicating limited direct market access.

Village-level governance structures are consistently present, including village authorities, mass organisations, and security units. The Lao Women's Union is the only women-led organisation reported across all villages and represents an important entry point for gender-responsive programming. Langchong additionally reports a Village Economic Unit, suggesting more structured economic coordination in that village.

Awareness of the term "climate change" is low; however, most villages report experiencing weather-related impacts affecting agriculture, water, and infrastructure. Natural hazards such as storms, droughts, floods, landslides, and pest outbreaks are recurrent. Community responses remain largely reactive, and no village reports having a formal Disaster Risk Reduction (DRR) plan or committee at baseline.

Overall, the baseline highlights favourable conditions for programme implementation, including infrastructure access and established village institutions. At the same time, continued reliance on agriculture, limited market access, uneven vulnerability, and the absence of structured DRR mechanisms underscore the importance of targeted, resilience-focused, and village-specific interventions under the CRED programme.

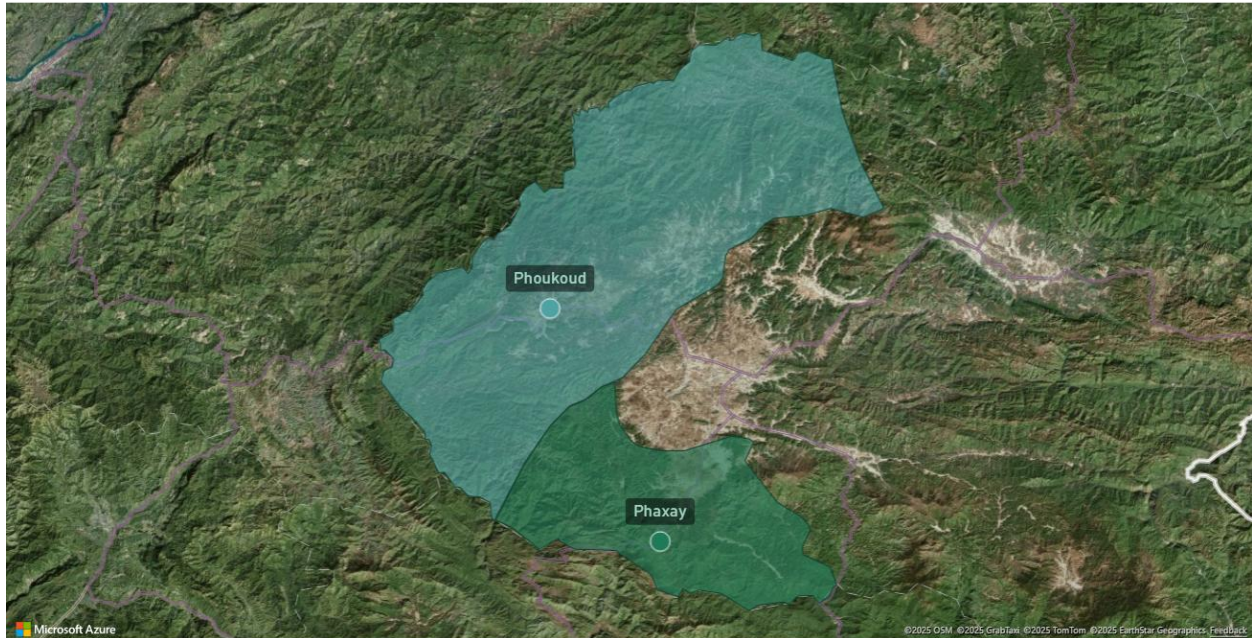
1. Coverage and Survey Scope

The CRED baseline survey in Xiengkhouang Province covered two districts (Paxay and Phoukoud) and four villages, representing a total of 318 households. The surveyed villages were Nakeu, Namka, Langchong , and Namsam.

At provincial level, the survey captures a mix of village sizes and administrative configurations, providing a baseline snapshot of settlement structures and household conditions within the targeted areas.

Figure 1 Map of targeted districts in Xiengkhouang Province

Targeted District In Xiengkhouang



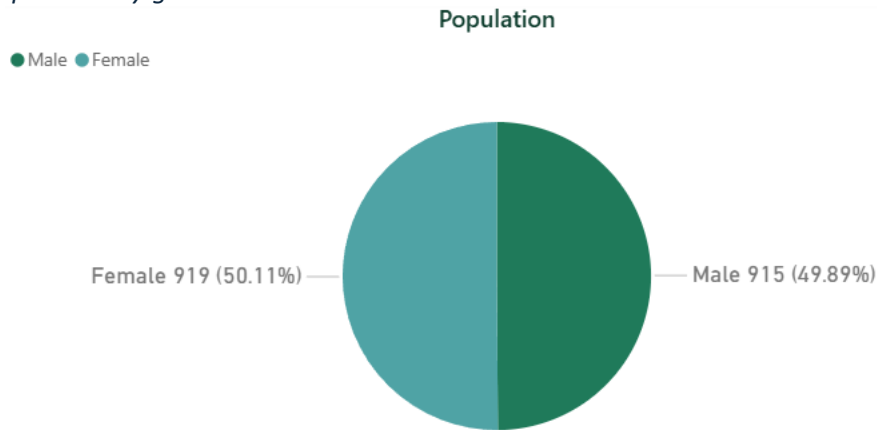
Methodological Note and Limitations

The findings presented in this report are based on village-level data collected through the CRED baseline survey conducted in 2022 in Xiengkhouang Province. Results reflect self-reported information from village authorities and community representatives. While the survey provides a comprehensive snapshot of baseline conditions, findings should be interpreted as indicative rather than exhaustive, particularly for qualitative perceptions related to climate change, hazards, and well-being.

2. Population Structure

The total population recorded across the four surveyed villages is approximately 1834 people, comprising 915 males and 919 females. The gender distribution is nearly equal, indicating no significant gender imbalance observed at baseline.

Figure 2 Population by gender



This population profile provides a reference point for monitoring demographic trends and any gender-differentiated effects of CRED interventions over time.

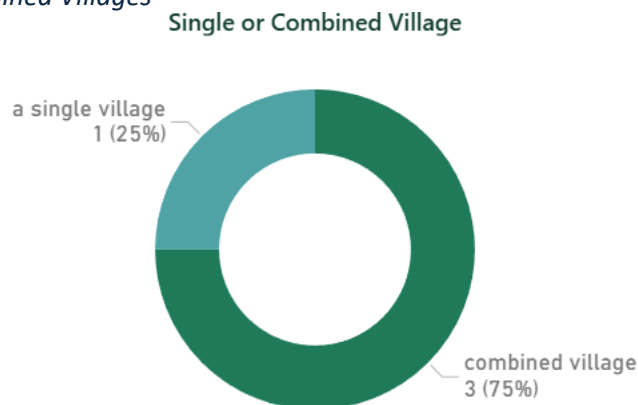
3. Village Structure and Administrative Configuration

3.1 Single vs. Combined Villages

Most surveyed settlements (75%) are classified as combined villages, while 25% are identified as single villages. This predominance suggests that a large share of households are administratively grouped under one village unit, often encompassing multiple sub-settlements.

Such configurations may influence coordination mechanisms and the way services and information reach dispersed households.

Figure 3 Single vs. Combined Villages



3.2 Access to Basic Infrastructure and Services

3.2.1 Summary of Access (Roads, Schools, Electricity, Water)

All surveyed villages report year-round road accessibility, indicating stable baseline physical connectivity. All villages also report on the presence of electricity infrastructure and a piped water supply system. However, access to education services is uneven: three villages (Namka, Langchong, Namsam) report a primary school in the village, while Nakeu reports no primary or secondary school, implying that children must travel outside the village to access schooling.

Table 1 Access to Basic Infrastructure and Services (road, school, electricity, % electricity, piped water

District	Paxay		Phoukoud	
Village	Nakeu	Namka	Langchong	Namsam_nameam
Is this community road accessible all year	Yes	Yes	Yes	Yes
Is there a primary school or a high school in the village?	None	Primary School	Primary School	Primary School
Is there Electricity?	yes	yes	yes	yes
% Households with Electricity	100.00%	100.00%	100.00%	94.12%
Is there a piped water supply available in the village	Yes	Yes	Yes	Yes

3.2.2 Electricity Access

Electricity access is high across all surveyed villages. At household level, Nakeu, Namka, and Langchong report 100% coverage. Namsam reports 94.12% household coverage, indicating near-universal access but with a small remaining gap.

Overall, electricity does not appear to be a major structural constraint at baseline and provides a favorable enabling environment for programme implementation and service delivery.

3.2.3 Drinking Water Sources and Water Supply

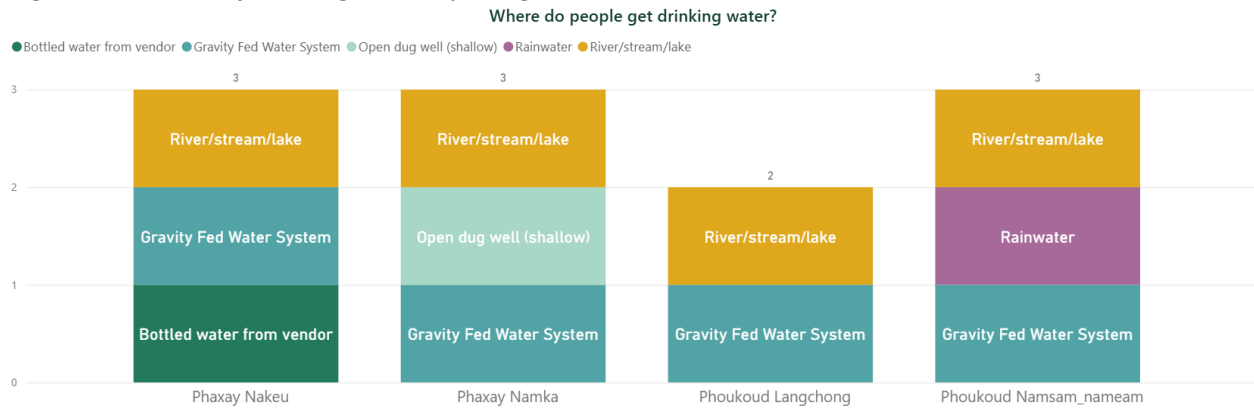
All villages report having a piped water supply system, but households rely on multiple drinking water sources, suggesting that reliability and seasonal variability remain important considerations. Gravity-fed water systems are consistently used across all villages and form the core drinking water source. At the same time, river/stream/lake water is reported in all villages, indicating continued reliance on natural water sources alongside improved infrastructure.

Village-level patterns show variation:

- Nakeu combines gravity-fed systems with bottled water and surface water.
- Namka supplements gravity-fed systems with shallow open dug wells and surface water.
- Namsam uses rainwater in addition to gravity-fed systems and surface water.
- Langchong relies primarily on gravity-fed systems and surface water sources.

These patterns indicate that, despite piped systems, households continue to diversify water sources, likely reflecting differences in convenience, service reliability, or seasonal conditions.

Figure 4 : Sources of drinking water by village



3.2.4 Key Baseline Findings and Implications (Infrastructure & Services)

Key findings

- Electricity access is near-universal, with 100% coverage in three villages and 94.12% in one village.
- All villages report piped water systems, yet households continue to rely on multiple drinking water sources, including surface water.
- Road access is stable throughout the year in all surveyed villages.
- Educational infrastructure is uneven, with one village lacking a school.

Implications for CRED Implementation

Good access to electricity and year-round roads creates a strong foundation for CRED activities, making coordination, communication, and monitoring easier across all villages.

At the same time, the continued use of rivers and streams for drinking water, despite the presence of piped systems, indicates that water reliability and safety still need attention.

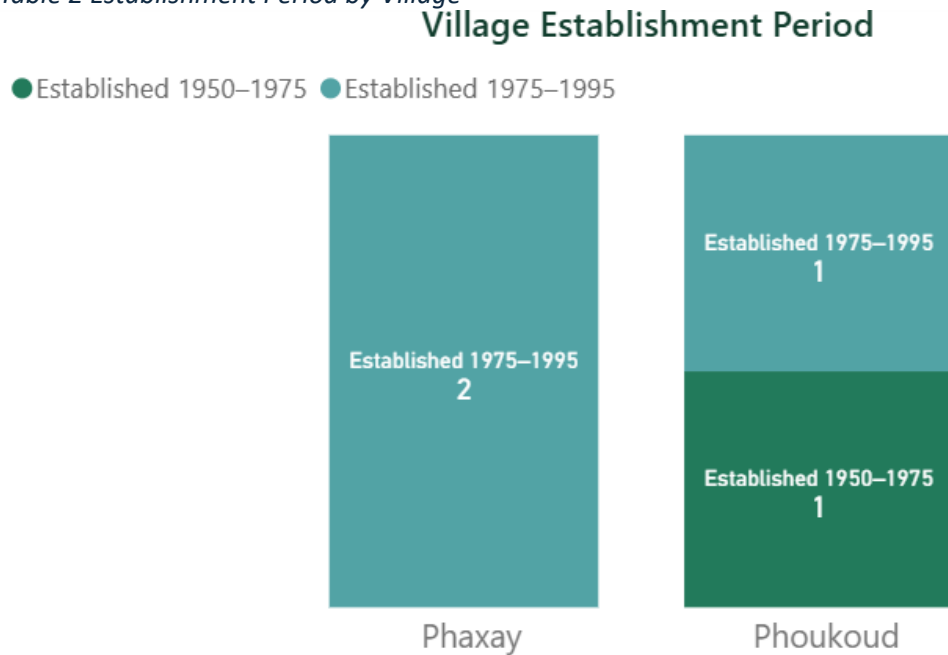
Differences in access to education services, especially the absence of a school in Nakeu village may influence how households use services and could contribute to uneven vulnerability between villages.

4. Village Establishment Period

Three of the four villages surveyed were established between 1975 and 1995. One village was established earlier, between 1950 and 1975.

This means that most villages have a similar history and were formed around the same time, which may explain why their infrastructure and local institutions are broadly comparable. The older village reflects earlier settlement patterns and may differ slightly in terms of population size and access to services.

Table 2 Establishment Period by Village



5. Household Distribution by District and Village

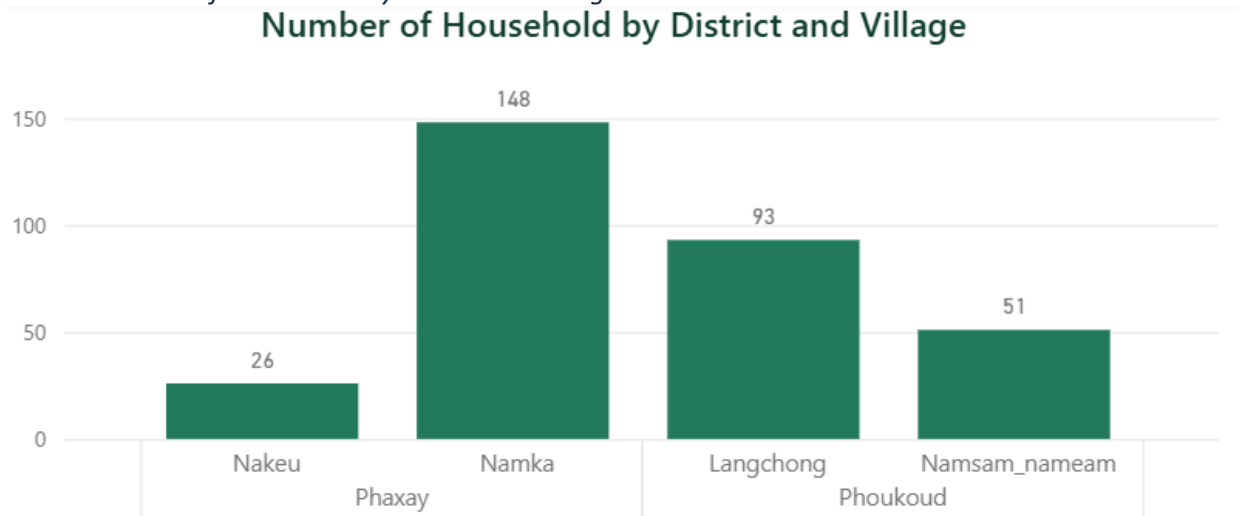
Household distribution varies considerably across the four villages surveyed. Namka village is the largest, with 148 households, followed by Langchong with 93 households. In contrast, Namsam (51 households) and Nakeu (26 households) are substantially smaller in size.

At district level, household numbers are relatively balanced:

- Paxay District: 174 households
- Phoukoud District: 144 households

Differences in village size show that settlements vary in scale across and within districts. Larger villages may need wider coverage to reach all households, while smaller villages may face specific challenges in accessing services and support. Understanding these differences at baseline helps inform how CRED activities should be planned and targeted in each village.

Table 3 Number of households by district and village



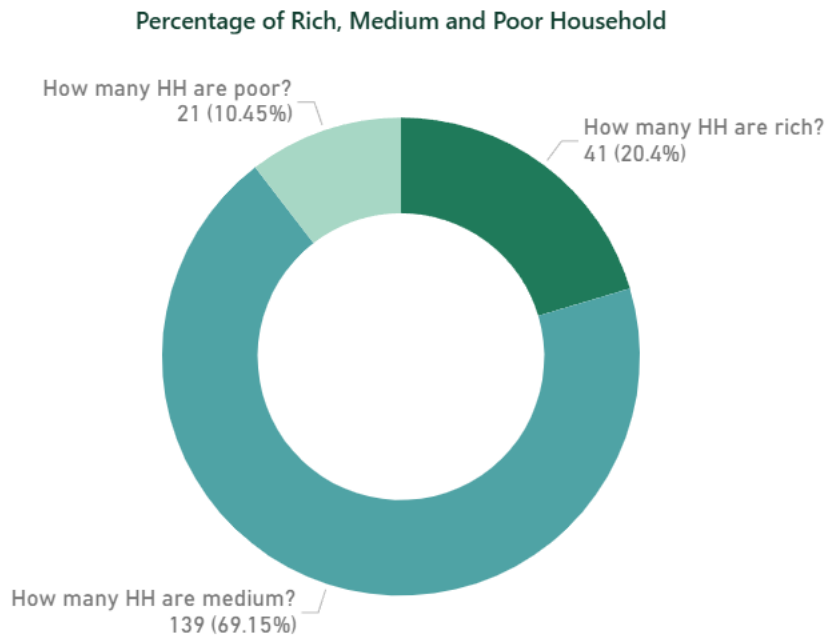
6. Household Economic Categorization

6.1 Household Economic Profile

Across all surveyed households, medium households represent the majority (69.15%), followed by rich households (20.40%) and poor households (10.45%).

Most households are neither highly vulnerable nor economically well-off but remain moderately positioned and potentially sensitive to economic or climate-related shocks.

Figure 5 Share of rich/medium/poor households



6.2 District-Level Comparison of Household Economic Categories

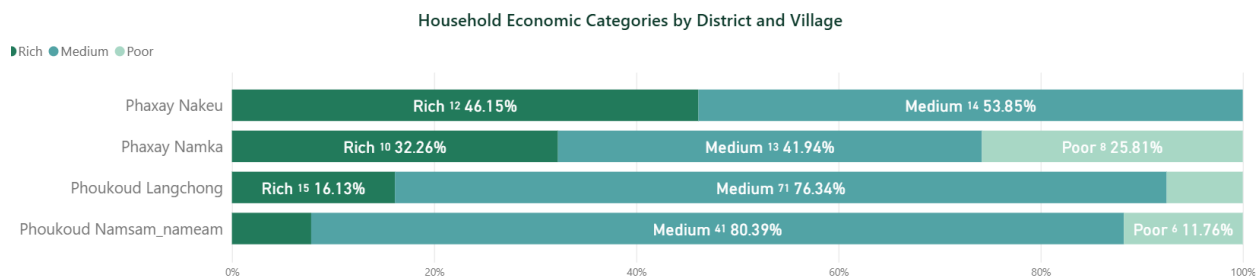
Clear differences in household economic composition are observed between districts and across villages. In **Phoukoud District** (144 households), economic conditions are relatively uniform, with most households classified as medium (77.8%), and smaller shares of poor (12.5%) and rich households (8.3%). This concentration indicates broadly similar livelihood conditions across villages at baseline.

In **Paxay District** (174 households), the economic profile is more diverse. Medium households remain the largest group (60.9%), but the district has a higher share of rich households (30.5%) alongside a smaller yet present proportion of poor households (8.6%). This reflects greater economic differentiation compared to Phoukoud.

Village-level data further illustrate these contrasts. **Nakeu** shows comparatively strong economic conditions, with households evenly split between medium and rich categories and no poor households reported. **Namka**, by contrast, displays the greatest internal variation, with over one-quarter of households classified as poor. In **Phoukoud District**, both **Langchong** and **Namsam** are dominated by medium households, indicating limited economic differentiation at village level.

Phoukoud District villages exhibit relatively homogeneous economic conditions, while Paxay District particularly Namka shows greater internal variation and vulnerability. These patterns confirm that economic conditions are uneven across locations, supporting the need for district- and village-specific targeting and tailored implementation under the Climate-Resilient Extension and Development (CRED) programme.

Figure 6 Household economic categories by district and village



7. Livelihood Activities and Place of Work

7.1 Main and Secondary Livelihood Activities by Village

Across all four villages, farming is consistently reported as a main occupation, confirming agriculture as the primary livelihood base in both districts. Livelihood profiles differ across villages in the type and breadth of secondary activities.

- **Nakeu and Namka (Paxay District):** More diversified profiles. Alongside farming, government employment is reported as important, with secondary activities including hired labor, plantation work, trading, and plant-related activities.
- **Langchong (Phoukoud District):** Farming and government employment remain main occupations, with plant-related activities also reported as main and trading as secondary. This pattern aligns with the presence of a Village Economic Unit reported in this village.

- Namsam (Phoukoud District): Farming and government employment remain dominant, while factory work and maize production appear as secondary. Returning migrant labor linked to COVID-19 disruption is also reported, indicating livelihood exposure to external labor-market shocks.

Figure 7 Main and secondary occupations by village

District	Phaxay		Phoukoud	
	Nakeu	Namka	Langchong	Namsam_nameam
Factory				Main
Cash crop			Main	
Corn			Main	Secondary
Garden(Vegetable)	Secondary	Secondary	Main	Secondary
Go to abroad				Main
Government officer	Main	Main	Main	Main
Hired labourer/worker	Secondary	Secondary		
Migrant labourer and back to home town because of COVID				Secondary
Private employee			Main	
Rice	Main	Main	Main	Main
Trader	Secondary	Secondary	Secondary	

7.2 Livelihood Activities and Place of Work

Baseline data show that livelihoods span village-based, district-based, and extra-provincial locations:

- Village-based: farming, plantation work, cash crop production, maize cultivation (primarily within village areas); trading mainly within villages or district markets.
- District/province-based: government employment (e.g., teachers and other public roles) mainly in district/province centers, with some posts in villages.
- Extra-provincial: private employment, factory work, migrant labor mainly outside district/province, often in urban centers.

7.3 Farming System Composition

The farming system data show that rice is the main crop across all surveyed villages and remains the basis of household food security. Maize (corn) is also commonly grown, especially in Phoukoud District, where it is an important cash crop. Some differences in the reported participation for rice and maize appear across villages. These differences should be interpreted with caution, as rice and maize are widely cultivated in the area and the variation likely reflects missing or incomplete reporting rather than the absence of production.

Livestock rearing is an important part of farming systems in all villages. Cattle and poultry are key livestock types and play an important role in household income and assets. Buffalo, pigs, and goats are also raised,

but participation varies by village. Where lower or missing values are reported, this likely reflects incomplete data rather than real differences in farming practices, especially given the similar farming conditions across neighboring villages.

Figure 8 Crop and livestock activities by village (% of households)

Category	Farming System							
	District	Crops			Livestock			
	Chili	Corn	Rice	Buffalo	Cow	Goat	Pig	Poultry
Phaxay								
Nakeu			100%	77%	100%		38%	100%
Namka	47%							
Phoukoud								
Langchong		100%	100%	4%	75%		100%	100%
Namsam_nameam	20%	100%	100%	10%	80%	12%	78%	100%

Differences in reported crop and livestock participation reflect available survey responses. Given that staple crops and livestock are widely practiced in the area, some variation is likely due to incomplete reporting rather than the absence of activities.

8. Key Household Assets

Across the surveyed villages, farmers consistently identify agricultural land (including paddy land and cultivated land) and livestock, especially cattle and buffalo as their most valuable assets. Housing and productive equipment (including tractors) are also cited.

Household assets are largely tangible and agriculture-based, providing an important baseline for understanding livelihood security and sensitivity to shocks.

9. Sources of Agricultural Knowledge and Learning

The baseline survey shows that farmers’ access to agricultural knowledge and external support varies across villages, depending on the presence of development projects and private sector actors.

Across all surveyed villages, the District Agriculture and Forestry Office (DAFO) is consistently reported as the primary source of agricultural knowledge and extension support. This confirms DAFO’s central role as the backbone of agricultural learning in both Paxay and Phoukoud districts.

In Paxay District, exposure to external projects is limited.

- In Nakeu village, agriculture-related support is reported, with DAFO identified as the sole source of agricultural knowledge.
- No nutrition-related projects are reported in Paxay villages. This suggests a relatively narrow institutional environment, with farmers relying mainly on government extension services.

In Phoukoud District, villages report a broader range of project engagement.

- In Langchong, both agriculture and nutrition projects are reported, alongside DAFO and technical support from a private maize (corn) company.
- In Namsam, agriculture and nutrition projects are also reported, with farmers accessing support from multiple actors, including DAFO, Caritas, ADRA, the Catchment Area Project, and a private maize company.

The findings indicate that while DAFO remains the most consistent and universal source of agricultural knowledge, villages in Phoukoud District, particularly Namsam benefit from greater exposure to development projects and private sector technical advice. This creates differing learning environments across villages, which may influence farming practices, access to innovations, and future adoption of improved techniques under the CRED programme.

Figure 9 Projects operating in the village

What project are going on in this village?

District	Agriculture	Nutrition
Phaxay		
Nakeu	Agriculture	
Phoukoud		
Langchong	Agriculture	Nutrition
Namsam_nameam	Agriculture	Nutrition

10. Local Economy, Market Access and Trading Conditions

10.1 Products Available and Trading Arrangements

Figure 10 Products available in the village and trading arrangements

District	Village	Products Available	Main Arrangement	Trading
Paxay	Nakeu	Bamboo shoots, cattle, poultry, rice	Middlemen	
	Namka	Cattle, chili	Middlemen	
Phoukoud	Langchong	Cattle, maize (corn)	Middlemen	
	Namsam	Cattle, Job’s tears, maize (corn), chili	Middlemen	

The baseline survey shows that agricultural products available in the surveyed villages are marketed almost exclusively through middlemen, indicating a trading environment dominated by intermediaries and limited direct access to end markets.

In Paxay District, trading arrangements are as follows:

- Nakeu village reports bamboo shoots, cattle, poultry, and rice as key products, all sold through middlemen.
- Namka village reports cattle, chili as the main products traded through middlemen.

In Phoukoud District, a similar reliance on intermediaries is observed:

- Langchong village reports cattle and maize (corn) traded through middlemen.
- Namsam village reports a wider range of products cattle, Job’s tears, maize (corn), and chili all sold through middlemen.

Across all four villages, no alternative trading arrangements such as direct sales, collective marketing, or contract farming are reported at baseline. Middlemen therefore represent the sole trading channel for all identified products.

This common reliance on middlemen shows that villages and districts face similar market access conditions. At baseline, farmers mainly sell their products through intermediaries rather than directly to markets or buyers.

This situation provides a clear reference point for the CRED programme. Any future changes in how farmers sell their products such as improved market linkages, stronger bargaining power, or new value chain arrangements can be compared against this baseline.

Baseline implication

The fact that all villages depend on middlemen indicates limited direct access to markets at baseline. This highlights the importance of strengthening market linkages and value chain participation if farmers’ income opportunities are to improve under the CRED programme.

11. Ethnic Composition

Five ethnic groups are represented across the four surveyed villages. The population is mainly Hmong, who account for just over half of the total population (52.18%). This is followed by Lao Theung (16.52%), Khmu (13.20%), Lao/Phuan (10.31%), and Taidam (7.80%).

Figure 11 Population by ethnicity

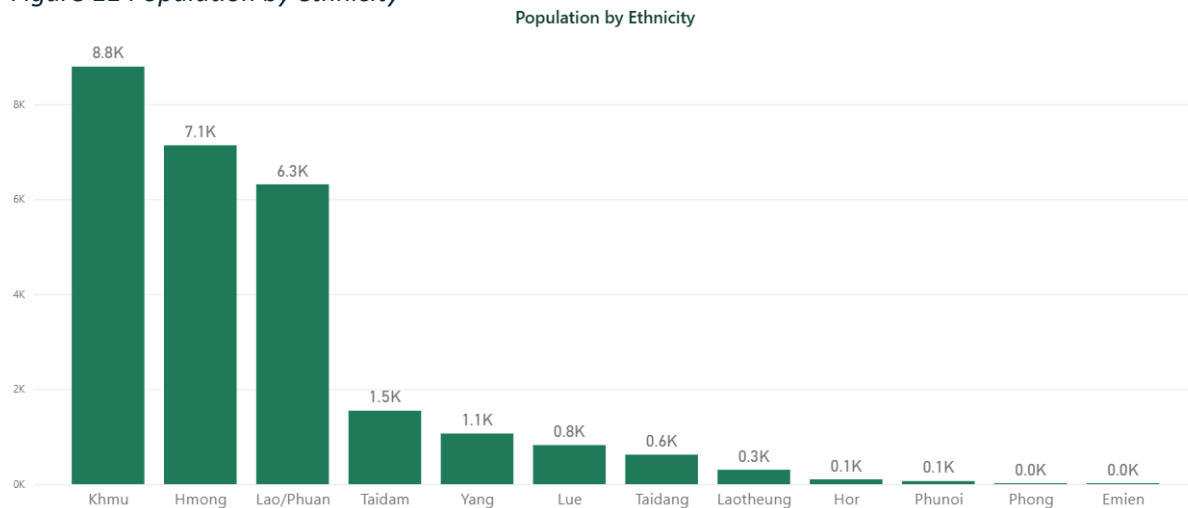
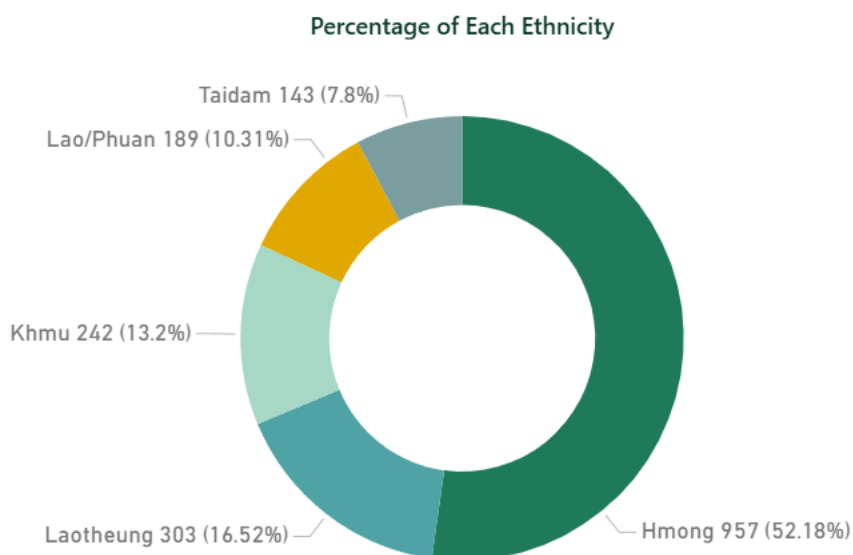


Figure 12 Percentage share by ethnicity



At village level, ethnic composition is largely homogeneous, with most villages dominated by a single ethnic group:

- Nakeu village is predominantly Taidam
- Namka village is predominantly Hmong
- Namsam village is predominantly Khmu
- Langchong village is the only village reporting the presence of two ethnic groups, indicating a relatively higher level of ethnic diversity compared to the other villages

This pattern shows that ethnic diversity is limited in most villages, with strong ethnic concentration at village level. As a result, community engagement, communication, and facilitation approaches under the CRED programme will need to be adapted to the dominant ethnic group in each village. In particular, the large share of Hmong households highlights the importance of culturally and linguistically appropriate approaches in Hmong-majority areas.

Figure 13 presents the ethnic composition of the surveyed population, while Table 12 summarizes the dominant ethnic group at village level.

District	Village	Dominant Ethnic Group(s)	Ethnic Composition Pattern
Paxay	Nakeu	Taidam	Predominantly single ethnic group
Paxay	Namka	Hmong	Predominantly single ethnic group
Phoukoud	Namsam	Khmu	Predominantly single ethnic group
Phoukoud	Langchong	Lao/Phuan and Laotheung	Mixed ethnic composition

12. Village Institutions and Local Governance Structures

All four surveyed villages report the presence of core village-level governance and community institutions. These include village authorities, the Lao Youth Union, the Lao Women’s Union, village security structures (including village police and village soldiers), and village elder unions. The consistent presence of these

institutions indicates that basic governance, representation, and community coordination mechanisms are in place across the surveyed areas.

Across all villages, the **Lao Women’s Union** is the **only formally established and women-led organization**. It is present in all four villages, while no other women-led organizations are reported. This highlights the Lao Women’s Union as the primary institutional entry point for gender-responsive engagement and women’s participation at village level.

Langchong village additionally reports the existence of a **Village Economic Unit**, which is not present in the other surveyed villages. This suggests a more formalized structure for economic coordination and collective economic activities in Langchong compared to other locations.

Household Decision-Making and Gender Roles:

Joint decision-making between husbands and wives is reported across all surveyed villages. While this indicates a degree of shared household decision-making at baseline, the finding reflects reported practice rather than relative decision-making power, which may vary depending on the type of decision and household context.

The consistent presence of village institutions provides an enabling governance environment for programme implementation, particularly for activities requiring coordination, information dissemination, and collective action. The Lao Women’s Union represents a key platform for gender-focused interventions, while the Village Economic Unit in Langchong may facilitate more structured engagement on livelihood and economic development activities.

13. Local Economic Activities and Business Environment

13.1 Business Activities at Village Level

The baseline survey indicates a modest local business environment across the four surveyed villages. Economic activities are limited in number and scale, reflecting a largely subsistence-oriented local economy.

Across all villages, agriculture, forestry, and fishing-related activities are reported, confirming their central role not only as household livelihoods but also as the primary form of local economic activity. In selected villages, wholesale and retail trade and repair of motor vehicles and motorcycles are also reported, indicating the presence of basic service activities that support local consumption and mobility.

Figure 14 Business Activities Operating at Village Level

District	Village	Agriculture, Forestry & Fishing	Wholesale & Retail Trade	Repair of Motor Vehicles & Motorcycles	Number of Business Types
Paxay	Nakeu	✓	✓	-	2
Paxay	Namka	✓	-	-	1
Phoukoud	Langchong	✓	✓	✓	2
Phoukoud	Namsam	✓	-	-	1
Total		4 villages	2 villages	1 village	

Business diversity remains low, with each village reporting only one to two types of business activities. This narrow economic base suggests limited opportunities for income diversification and local value addition beyond agriculture at baseline.

13.2 Infrastructure Constraints Affecting Business Development

Villages report different types of infrastructure constraints that affect the growth and profitability of local businesses, reflecting location-specific challenges.

- In Nakeu village (Paxay District), constraints are reported under the “other” category. These refer to flood-affected physical infrastructure, including overflowing bridges, problems with gravity-fed water systems, and small weirs in certain locations. Such issues can disrupt access and local economic activities, particularly during the rainy season.
- In Namka village (Paxay District), road access and telephone services are identified as the main constraints, pointing to limitations in connectivity and communication that may restrict market access and coordination.
- In Langchong village (Phoukoud District), storage infrastructure is reported as the key constraint, indicating challenges related to product preservation and stock management, especially for agricultural produce.
- In Namsam village (Phoukoud District), road infrastructure is identified as the primary constraint, highlighting the importance of reliable transport routes for moving goods and accessing markets.

The findings show that constraints to business development differ across villages and are closely linked to local infrastructure conditions, underscoring the need for village-specific responses.

13.3 Community Responses to These Problems

Villages report a set of practical and immediate actions to address infrastructure and environmental constraints affecting daily activities and local businesses.

Commonly reported responses include:

- Fixing infrastructure repeatedly as problems arise (“fix often”),
- Paying machinery (such as excavators or tractors) to clear landslides and repair damaged roads,
- Using trucks for transport to maintain access when roads are partially damaged,
- Using chemicals or medicines to control pests or weed-related problems.

These responses indicate that communities rely mainly on locally managed, short-term coping measures focused on restoring basic functionality. Longer-term or preventive infrastructure solutions are not reported at baseline.

14. Natural Resource Management and Land Use Governance

14.1 Community Land Use Planning

The baseline survey shows that all four surveyed villages report the existence of a community land use plan. The land use planning has been formally introduced across both Paxay and Phoukoud districts and that basic frameworks for managing land and natural resources are in place at village level.

In Paxay District, both Nakeu and Namka villages confirm the presence of a community land use plan. Villagers report being involved in the planning process, mainly through consultation and agreement mechanisms. This suggests a participatory approach to land use planning, although the level of formalization and implementation may vary between villages.

In Phoukoud District, both Langchong and Namsam villages also report having a community land use plan, with community members involved in the planning process. This indicates a consistent application of land use planning mechanisms across districts at baseline.

Overall, the findings show that community land use planning is universal among the surveyed villages, providing a common institutional basis for managing agricultural land, forest areas, and settlement expansion.

Figure 15 Community Land Use Plan and Community Involvement by Village

District	Village	Community Land Use Plan Exists	Community Involvement in Plan Development
Paxay	Nakeu	Yes	Community consulted and agreed
Paxay	Namka	Yes	Community involved in planning discussions
Phoukoud	Langchong	Yes	Community involved through meetings
Phoukoud	Namsam	Yes	Community consulted and agreed

14.2 Non-Timber Forest Products (NTFP) Management

While land use plans are reported in all villages, the presence of formal NTFP management plans varies across locations.

In Paxay District, Namka village reports having an NTFP management plan, while Nakeu village does not. This shows differences in the formal management of forest resources within the same district.

In Phoukoud District, both Langchong and Namsam villages report the existence of an NTFP management plan. This suggests a more comprehensive approach to forest and NTFP governance in these villages compared to some locations in Paxay District.

The uneven presence of NTFP management plans indicates that, although land use planning is widespread, the institutionalization of forest and NTFP management remains at different stages across villages.

District	Village	NTFP Management Plan Exists	Reported Lead / Responsible Actor
Paxay	Nakeu	No	-
Paxay	Namka	Yes	Village authority / village group
Phoukoud	Langchong	Yes	Village authority
Phoukoud	Namsam	Yes	Village authority

15. Climate Change Awareness, Hazards, and Disaster Impacts

15.1 Awareness of Climate Change

Across the four surveyed villages, awareness of the term “*climate change*” is very low. Respondents in all villages report that they have not heard about climate change as a concept.

Despite this low level of formal awareness, communities report experiencing changes in weather and environmental conditions when asked whether such changes are affecting their village. It means there is a clear gap between technical terminology and lived experience.

- In Nakeu village (Paxay District), respondents report that changes in weather are affecting the community, particularly through flooding of paddy fields and damage to small-scale water infrastructure such as broken weirs.
- In Langchong village (Phoukoud District), respondents also report that changes are affecting the community, describing a combination of drought, landslides, pest outbreaks, and flooding, which together influence agricultural production and land stability.
- In Namsam village (Phoukoud District), respondents report that irregular rainfall is affecting farming and daily life. Excess rainfall is reported to reduce maize yields due to poor crop development, while dry periods result in water shortages for agriculture and household use.
- In contrast, Namka village (Paxay District) reports neither awareness of climate change nor perceived impacts on the community.

While climate change terminology is not widely recognized, most villages report concrete weather-related impacts that affect agriculture, water availability, and local infrastructure.

15.2 Types of Hazards Experienced

Villages report exposure to a range of natural hazards over recent years, with variation across districts and villages.

In Paxay District:

- Nakeu village reports exposure to destructive storms, drought, floods, frost, landslides, and pest or disease outbreaks, indicating a wide range of hazards affecting both agriculture and infrastructure.
- Namka village reports destructive storms as the main hazard.

In Phoukoud District:

- Langchong village reports exposure to destructive storms, drought, floods, landslides, and pest or disease outbreaks, reflecting multiple and recurrent hazard types.
- Namsam village reports drought as the primary hazard affecting the community.

Figure 16 Types of Hazards Experienced by Village (Past Years)

District	Village	Destructive Storm	Drought	Flood	Frost	Landslide	Pest / Disease Outbreak
Paxay	Nakeu	✓	✓	✓	✓	✓	✓
Paxay	Namka	✓	-	-	-	-	-
Phoukoud	Langchong	✓	✓	✓	-	✓	✓
Phoukoud	Namsam	-	✓	-	-	-	-

Across all villages, destructive storms and drought emerge as the most commonly reported hazards, while floods, landslides, frost, and pest or disease outbreaks are more location specific.

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

All surveyed villages report the occurrence of natural disasters within the past three years, although the scale of impact differs by village.

- Nakeu village reports 26 households affected.
- Langchong village reports 93 households affected.
- Namsam village reports that 51 households were affected.
- Namka village reports no households affected during the same period.

The number of affected households broadly corresponds to village size, with larger villages reporting higher absolute numbers of affected households.

Perceptions of disaster severity over time vary:

- Nakeu and Namsam report that recent disaster impacts were *less severe than in previous years*.
- Namka and Langchong report that impacts were *like previous years*.

Villages that experienced disasters report damage to both households and village infrastructure, particularly in Nakeu and Langchong, where impacts on farmland, housing, and local infrastructure are noted.

Community responses to disasters are largely reactive and locally managed, including:

- repairing damaged infrastructure,
- hiring machinery to clear landslides,
- using trucks for transport when roads are damaged,

- applying chemical solutions to address pest outbreaks.

Across all villages, village authorities and local government are consistently identified as the primary sources of assistance during disasters. No additional formal external support mechanisms are reported at baseline.

15.4 Disaster Risk Reduction (DRR) Planning and Institutional Capacity

The baseline survey showed that none of the four surveyed villages have a formal Disaster Risk Reduction (DRR) plan or a dedicated DRR committee at village level.

Although villages report experiencing recurrent natural hazards, responses are primarily ad hoc and focused on immediate recovery actions, such as repairing damaged infrastructure, clearing landslides, and relying on local authorities for assistance. No village reports having structured preparedness measures, early warning mechanisms, or formalized planning processes to reduce disaster risk before hazards occur. These findings suggest that disaster management at village level remains predominantly reactive, with limited emphasis on preparedness, prevention, or long-term risk reduction.

16. Perceived Changes Over Time and Well-being Trends

Across all surveyed villages, respondents report that living conditions have improved compared to earlier generations. These improvements are mainly linked to better basic infrastructure, including improved road access, expanded electricity coverage, and greater availability of agricultural equipment such as tractors and rice mills. Villagers also note improvements in housing quality, with more permanent structures becoming common.

At the same time, respondents highlight environmental changes alongside these developments, particularly a decline in biodiversity.

Villagers perceive that life is getting better, largely due to improved infrastructure such as electricity, roads, and telephone services, which make daily life more convenient and support farming activities.

This gap between recurrent hazard exposure and the absence of formal DRR structures highlights a critical entry point for CRED interventions focused on community-based disaster preparedness, institutional strengthening, and anticipatory risk management.

17. Perceived Major Problems

Across the surveyed villages, respondents identify health-related issues as the most significant problems affecting their communities. These concerns relate to both human health (disease and general health issues) and animal health (livestock disease and animal health problems), highlighting the central importance of health and livestock to household well-being and livelihoods.

Figure 17 Perceived Major Problems by District and Village

District	Village	Human Disease / Health	Animal Disease / Health	Robbery	Other (Herbicide use)
Paxay	Nakeu	✓	✓	-	-
	Namka	✓	✓	✓	-
Phoukoud	Langchong	✓	✓	✓	✓
	Namsam	✓	✓	-	-
Total		3 villages	3 villages	2 villages	2 villages

At district level, some variation is observed in the types of problems reported by villages.

- In Paxay District, both villages identify human health and animal health as key concerns. Robbery is additionally reported in Namka village, while no other problem categories are mentioned.
- In Phoukoud District, health-related issues are likewise reported in both villages. Langchong reports a wider range of concerns, including human health, animal health, robbery, and an “other” issue, which refers specifically to herbicide use. Namsam reports concerns limited to human and animal health.

Human and animal health issues are consistently reported across all villages, making them the most common perceived problems at baseline. Concerns related to herbicide use are reported in only one village, indicating that environmental and chemical-related issues are present but not widespread across the surveyed area.

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 and are designed to capture key dimensions of livelihood resilience and vulnerability in a structured and comparable manner. Each score aggregates responses from a defined set of related questions and is standardized on a common scale. The scores reflect households’ self-reported conditions and capacities at baseline.

The scoring framework comprises nine dimensions aligned with the core objectives of the CRED programme:

- Income - perceived adequacy and stability of household income sources
- Access to services and information - access to basic services and relevant livelihood information
- Agrobiodiversity - diversity of crops and livestock activities as a proxy for production diversity
- Community self-reliance - perceived collective capacity and mutual support at community level

- Gender equity - selected aspects of participation and decision-making within households
- Disaster - exposure, perceived impacts, and preparedness related to climate and natural hazards
- Resources - access to productive resources such as land, inputs, and natural assets
- Productivity - perceived performance and efficiency of livelihood activities
- Market engagement - degree of interaction with markets, including selling practices and buyer access

Together, these dimensions provide a multi-dimensional baseline profile of household resilience that complements village-level structural data. The scores are intended to be interpreted comparatively across dimensions, rather than as absolute performance measures, and serve as a reference point for programme prioritization and future monitoring under the CRED programme.

18.2 Results: Average Scores by Dimension

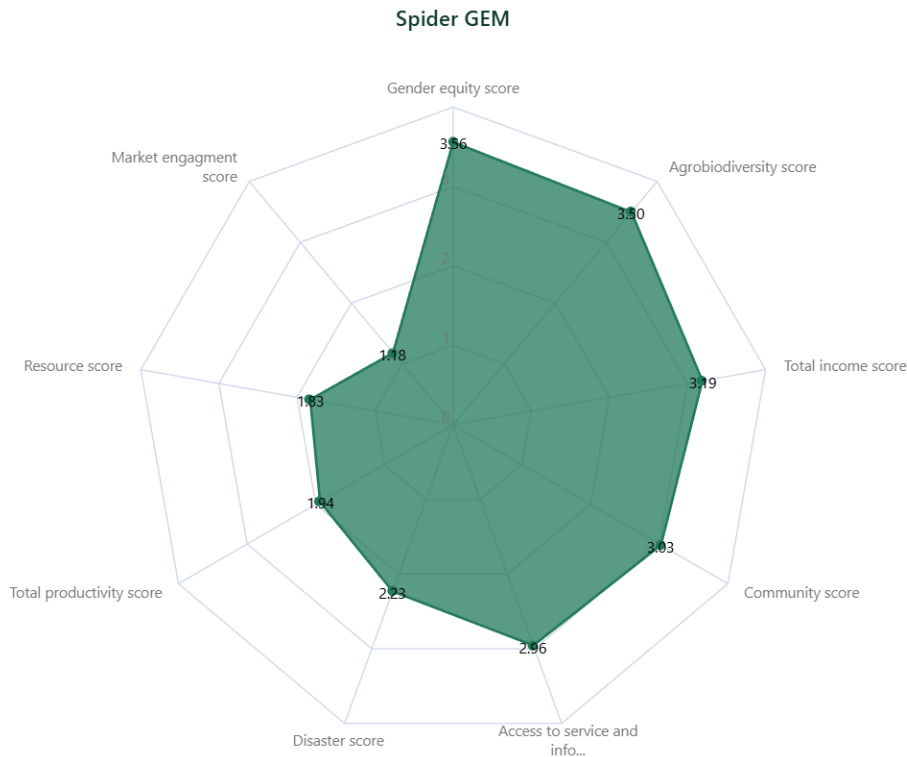
The household survey results reveal clear variation across the nine resilience and well-being dimensions at baseline (Figure 18). Overall, the score profile indicates relatively strong social and livelihood foundations, alongside pronounced constraints related to markets, productivity, and access to resources. The highest average score is recorded for gender equity (3.56), suggesting that households generally report relatively inclusive participation and decision-making practices at baseline. Agrobiodiversity (3.50) also scores highly, reflecting diversified crop and livestock activities that contribute to livelihood stability and food security. The total income score (3.19) and community self-reliance score (3.03) further indicate moderately favorable conditions in terms of income adequacy and perceived collective capacity at community level.

Access to services and information (2.96) remains close to the mid-point of the scale, suggesting that while households have some access to services and information channels, gaps in coverage, quality, or reliability persist. The disaster score (2.23) falls below the mid-point, pointing to limited preparedness and coping capacity in the face of climate- and hazard-related risks.

Lower scores are observed for dimensions linked to economic performance and productive capacity. Total productivity (1.94) and resource access (1.83) indicate significant constraints related to production efficiency and availability of productive assets or inputs. The lowest score by a wide margin is market engagement (1.18), highlighting very limited household interaction with markets, weak buyer linkages, and low levels of integration into value chains.

Overall, the score distribution shows a strong contrast between relatively positive social and livelihood foundations and substantial structural barriers affecting economic transformation and resilience.

Figure 18 Average household resilience and well-being scores by dimension (CRED Household Survey, baseline - Xiengkhouang).



18.3 Interpretation: Strengths, Gaps, and Implications for CRED

The household resilience and well-being profile in Xiengkhouang Province reflects a combination of notable baseline strengths and critical structural gaps that are highly relevant for CRED programming.

From a strengths perspective, relatively high scores for gender equity, agrobiodiversity, income, and community self-reliance indicate that households maintain diversified livelihood activities, report relatively inclusive household practices, and perceive a degree of collective capacity within their communities. These conditions provide a solid foundation for CRED interventions that rely on behavior change, collective action, and the adoption of improved practices.

At the same time, the score profile highlights clear constraints that limit livelihood resilience and economic advancement. Extremely low market engagement scores point to minimal interaction with formal markets, weak bargaining power, and heavy reliance on informal trading arrangements. Low productivity and resource scores further suggest that households face significant barriers to improving production efficiency and accessing or managing productive resources effectively. These gaps help explain why income outcomes remain moderate despite diversified farming systems.

The disaster score confirms that households remain vulnerable to climate- and hazard-related shocks, with limited preparedness and coping capacity. This finding aligns with village-level evidence of frequent hazard exposure and the absence of formal disaster risk reduction planning and institutional structures.

Taken together, the results suggest that CRED interventions in Xiengkhouang should prioritize transformative actions that strengthen market engagement, improve productivity through climate-

resilient and resource-efficient practices, and enhance household and community capacity for disaster preparedness. At the same time, existing strengths in agrobiodiversity, gender equity, and community self-reliance provide important entry points for scaling inclusive, collective, and resilience-oriented approaches.

As a baseline, these scores establish a clear reference point for tracking change over time, particularly in dimensions where initial constraints are most pronounced and where CRED interventions are expected to generate the greatest impact.

18. Key Baseline Implications for CRED (Evidence-based)

The baseline findings from Xiengkhouang Province highlight several structural and contextual factors that are critical for the design and implementation of CRED interventions.

The predominance of combined villages illustrated that programme implementation will need to account for **dispersed settlements** within a single administrative unit. Effective communication, coordination, and outreach mechanisms will therefore be essential to ensure that activities and information reach all sub-settlements, rather than only village centers.

Economic conditions vary notably between districts. Phoukoud District is characterized by relatively **homogeneous livelihood conditions**, with most households classified as medium. In contrast, **Paxay District displays greater economic differentiation**, with **higher proportions of both rich and poor households**, particularly in Namka village. These patterns point to uneven vulnerability and reinforce the **need for district- and village-specific targeting** approaches under the CRED programme.

Access to basic infrastructure represents a relative strength at baseline. Near-universal electricity coverage and year-round road access provide favorable conditions for programme coordination, service delivery, and monitoring. At the same time, the continued reliance on surface water sources alongside piped systems suggests that **water reliability and safety remain important concerns** that may affect household well-being and resilience.

Livelihoods across all surveyed villages remain strongly **agriculture-based**, with **limited diversification** into non-farm activities. Household assets are primarily land- and livestock-based, which increases sensitivity to climate variability, natural hazards, and market fluctuations. In addition, all agricultural products are sold through middlemen, indicating **limited direct market access** and weak bargaining power at baseline. Village-level institutions are consistently present and provide a solid governance foundation for programme implementation. The Lao Women's Union is the only women-led organization reported across all villages and represents a key institutional entry point for gender-responsive and inclusive programming. The presence of a Village Economic Unit in Langchong suggests greater potential for structured economic engagement in that village.

Although awareness of climate change terminology is low, communities report **direct experience of weather-related hazards** affecting agriculture, water resources, and infrastructure. Natural hazards are recurrent, and community responses are largely reactive. The **absence of village-level Disaster Risk Reduction (DRR) plans and committees represents a clear preparedness gap**. Current practices focus on short-term coping rather than prevention or risk reduction, highlighting a key entry point for CRED interventions aimed at strengthening preparedness, local institutions, and climate resilience.