

Final Report

A SMALL-SCALE STUDY FOR ASSESSING
THE PRF III - AF NUTRITION ACTIVITIES

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Disclaimer: This small-scale assessment report on Poverty Reduction Fund Phase III-Additional Financing Nutrition Activities was drafted jointly by Mr. Joost Foppes and Ms. Philaiphone Vongpraseuth with the support of the PRF III-AF Office. The information and views set out in this report are obtained from field interviews and desk review and are elaborated by the authors.

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Abbreviations

AHSP	Agricultural Health Service Providers AHSP
CDD	Community-Driven Development
CLEAR	Community Livelihood Enhancement and Resilience
COVID	Coronavirus Disease
DAFO	District Agriculture and Forestry Office
DHO	District Health Office
FGD	Focus Group Discussion
FNG	Farmer Nutrition Group
GAFFSP	The Global Agriculture and Food Security Program
GOL	Government of Lao PDR
HNG	Home Nutrition Garden
IFAD	The International Funding for Agriculture Development
KII	Key Informant Interview
MAF	Ministry of Agriculture and Forestry
MOH	Ministry of Health
NUT	Nutrition
NYG	Nutrition Young Graduates
PAFO	Provincial Agriculture and Forestry Office
PHO	Provincial Health Office
PRF	Poverty Reduction Fund
RRPMP	Reducing Rural Poverty and Malnutrition Project
SBCC	Social behavior Change and Communication
SDG	Small Discussion Group
SHG	Self-help Group
UNICEF	United Nations International Children's Emergency Fund
VNC	Village Nutrition Center
WHO	The World Health Organization

Executive Summary

Reducing child malnutrition is one the Lao government’s prioritized objectives targeting to achieve a stunting rate reduction of 25% by 2025¹. The World Bank is supporting the government in implementing the National Nutrition Strategy 2025 and its Plan of Action to address malnutrition through a multi-sector convergence approach between responsible ministries (Ministry of Public Health, Ministry of Agriculture and Forestry, Ministry of Education and Sports) in order to achieve the targets, set forth.

Since 2020, The World Bank is supporting a nutrition component under the current phase of the Poverty Reduction Fund (PRF-III Additional Financing). The main strategy is for mothers with young children and pregnant women to transform their nutrition behaviors through frequent group meetings to jointly produce and cook nutritious food for mothers and children in their first 1000 days, as well as peer learning through community produced videos, and working on home nutrition gardens (see Figure 1). Some 1,000-day women are also members of self-help groups for income generating activities as part of the projects livelihood activities. The nutrition component expects to target 469 villages in 12 districts of 4 northern provinces (Phongsaly, Houaphanh, Oudomxay and Xiengkhouang). To date, the project covers 231 villages, 460 Farmer Nutrition Groups with 17,898 members, of which 10,105 mothers and 7,793 children aged 0-23 months².

MAF invited the World Bank to support the design of a new PRF project called the “Community Livelihood Enhancement and Resilience (CLEAR)”. A small-scale study for assessing the PRF III-AF nutrition activities was conducted between February and March 2023 in aim to provide key recommendations that could be adopted for the new project. This study was carried out in 10 villages in two provinces (Oudomxay and Xiengkhouang) interviewing 339 respondents over a wide range of stakeholders (mothers segregated in wealth categories, village leaders, shopkeepers, district officials, project staffs). A qualitative survey methodology was used including semi-structured and key informant interviews to guide the discussion with the mentioned target groups.



The results from the literature review and field survey found that the nutrition component’s implementation and management are at satisfactory level as the project manages to create paradigm shift in social and behavior change in nutritious food preparation, hygiene, and consumption through communal cooking session combined with nutrition information, home visit to pregnant and lactating mothers and frequent child growth monitoring activities.

The PRF III AF was found to be well known for its creative approaches to promote nutrition enhancement at the village level. The assessment identified multiple success factors that lead to good implementation results.

Key findings:

Theme 1-Social and Behavior Change Communication: The PRF communal cooking combined with nutrition information sessions visibly lead to actual behavior change. This was backed by the testimonies from mothers, village authorities, and family members on better food prepared for children and family. Mothers also pay more attention to child growth and health. The main success factors are: (a) the key concept of preparing instant formulas for enriched porridge, which save women’s time, are easy to digest and make children grow faster, (b) PRF innovative video clubs that spur curiosity and learning through

¹ National Nutrition Strategy to 2025

² <https://prfmis.org/#/>

making their own videos and sharing them, (c) intensive training support provided by PRF staff and Nutrition Young Graduates (NYG). A grandmother from Houailom Village, Nonghet testified that “ *My daughter-in-law stops me from chewing rice to her babies and replaced with ready-to-eat mung bean porridge powder mix instead.* ”

Theme 2-Sourcing of Food: Among the interventions of the PRF-III nutrition program, the most successful were enriching porridge with protein-rich instant fish/frog powder and adding milk to porridge. The diversification of home gardens did not work well, as the crops introduced were not easy to grow and pilot farmers dealt with water shortages. The goat pilots were very successful but their scaling-up is hampered by the low productivity of local goats. The interviews found that food purchasing increases in better-off villages using their earnings from selling maize and livestock and as for the poorer villages, food production increases pairing with NTFPs collection.

Theme 3-Food Processing: PRF promoted porridge from pre-mixed dry powder are welcomed by mothers as it saves time and children love it. There is a growing demand for these pre-mixed ingredients and village shopkeepers are becoming interested in opportunities to sell them. Group members are also interested in producing healthy snacks for young school-going children. Goat dairy pilots created a new way of consuming milk through pancakes (Oudomxay) and omelets (Xieng Khouang).

Theme 4-Storage of food and water: 9 out of 10 villages reported that water shortages are the main issue for better hygiene, cooking, and growing vegetables. Glass jars used for storing pre-mix and fish powders work fine but are difficult to purchase as there is no value chain for this product in the country.

Theme 5-Linkages between nutrition and other PRF activities. There are clear links between nutrition, infrastructural PRF investments and various village funds. Self Help Group (SHG) loans are almost exclusively all used for small livestock raising. The repayment rate is very high and the program is very much appreciated. However, most of these animals are sold, not consumed in the household much.

Theme 6-Vulnerability and Inclusion. Poor households strongly benefit from direct-cash transfers such as provided via Reducing Rural Poverty and Malnutrition Project (RRPMP) for infant and young child feeding coupled with PRF dietary advise. It is important to maintain the complementarity of these two programs. Involvement of village authorities and local influencers is very effective and should be kept. Prioritizing women in the Farmer Nutrition Groups (FNGs) is an excellent approach to create more agency, leadership and participation of women in villages to take charge in changing nutrition behaviors.

Key Recommendations:

- The FNG approach should be scaled up in the CLEAR program, with special attention to retaining all its key success factors: frequent group meetings, facilitation by NYG, video clubs as a cost-effective way to support peer-to-peer learning. FNGs already have a strong impact on women empowerment. A special women leadership program could be added to the FNG approach to capitalize on this impact.
- To improve the effectiveness of Quarterly District Convergence Meetings, start each meeting with a presentation of updated data on indicators in child growth and malnutrition, segregated per village and per age category (0-6, 7-23, 24-60 months) as a shared basis for convergence planning.
- Allow more time for farmer networks to develop sustainable options for producing nutritious crops in gardens and from wild collection through continued field testing and peer-to-peer learning.
- Invest more in linkages between nutrition with water supply/storage and irrigation activities, either under PRF, or explore a separate climate-change and rural water supply program under the convergence program.



- Develop a program supporting village shop keepers to develop value chains for affordable and safe food storage solutions such as instant infant foods and healthy snack for young school children for which the project has created a demand. They can also relay messages on buying healthy foods (e.g., understanding the differences between various milk and milk replacement products). Support for quality control in cold chains for perishable products could also be explored.
- In-kind subsidies are necessary for poor households to be able to adopt the practice of providing enriched porridge to infants. The link between PRF support to FNGs and RRPMP support for mothers with young children should be maintained. Additional funding mechanisms for supporting food/nutrition security during climate-related disasters should be explored.

1. Introduction

1.1. Background and Context³

Lao PDR faces high prevalence of child undernutrition with a national average of 33 percent⁴. Figures from the Laos Social Indicator Survey (LSIS), 2017 showing stunting rates of children under five are higher in provinces like Phongsaly (54 %), Sekong (49.9%), Xiengkhuang (48.3 %) and Huaphanh (40.7 %). The stunting prevalence among children in poorest wealth quintile (48% stunted) are more than three times the rates for children in the richest quintile (14%), and ethnic groups (e.g. among Hmong-Mien reaching 50%). Food insecurity remains a critical issue in Lao PDR; a situation which was exaggerated by the COVID-19 pandemic. Round 5 of the World Bank’s rapid phone survey in May 2022 reported an increase in severe food security; and about 65 percent of households reporting on some sort of food insecurity.

With 20 years of experience in Community Driven Development (CDD), the Poverty Reduction Fund (PRF) is supporting the Government of Laos to improve child nutrition under the Ministry of Agriculture and Forestry (MAF) through community-based activities. The additional financing for PRF III, starting in 2020, is supporting activities linking nutrition and livelihoods. These activities are supporting the roll-out of the GOL’s nutrition strategy, in particular MAF’s priorities of food production and food processing/ transformation, combined with tailored social behavior change and communication (SBCC) on the agriculture-gender nutrition nexus. The PRF III AF has been building on lesson learned on from a pilot of village nutrition centers – known as VNCs – under PRF II which was conducted 2013-2016.

The re-engagement on nutrition under PRF III AF in 2020 is part of the World Bank’s nutrition convergence initiative emphasizing the first 1,000 days of life. The PRF targets 469 villages in 12 Districts in 4 Northern Provinces: Houaphanh, Oudoumxay, Phongsaly and Xiengkhouang. The key objective is to increase dietary diversity in children 6-23months. By 2024, it is expected, that 40 percent of children 6–23 months from farmer nutrition group households are consuming foods at least from four food groups.

PRF III supports four nutrition activities: Farmer nutrition groups, home nutrition gardens, multi-peer learning through video and social media, and goat dairy pilots.

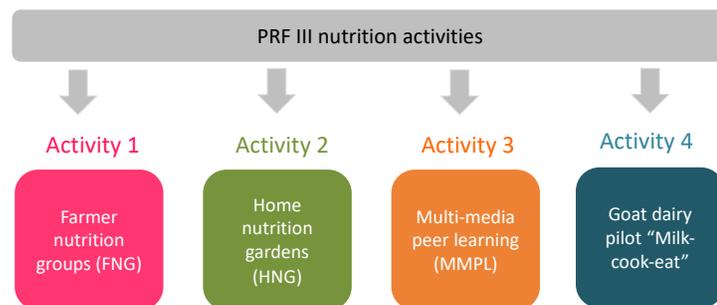


Figure 1: Overview of PRF nutrition activities

³ Term of Reference from RFP package

⁴ Laos Social Indicator Survey (LSIS), 2017

The PRF Program has been operating in the country for nearly two decades. The Ministry of Agriculture and Forestry (MAF) has invited The World Bank to support in designing a new project which will focus on enhancing resilience by improving livelihood opportunities and nutritional outcomes. This new project is called “Community Livelihood Enhancement and Resilience (CLEAR)” Project.

Under CLEAR it is planned to have a designated nutrition component bringing back the nutrition focus as under PRF III nutrition was only included with additional financing – starting in 2020. The nutrition component of this new project will focus on improving community level nutrition outcomes by building on lessons from the PRF III AF nutrition activities. Livelihood activities undertaken by Self-help Groups and Production Groups under another component are expected to contribute to a diversification of the food sources available at community level. An infrastructure component will invest into small-productive infrastructure which could support invest into food processing technology & equipment as well as to improve food storage and rain water storage. The nutrition component will finance three sub-components:

- Enhancing household food production, in particular for 1,000-day diets (focus on home nutrition gardening and goat dairy) and improving food and water storage;
- Deepening the footprint of the SBCC activities, in particular the nutrition related multi-media peer learning
- Extending food processing building on the formulas and recipes which were recently approved by MOH’s National Nutrition Center and potentially.

Furthermore, the CLEAR design aims to promote nutrition positive infrastructure and livelihood activities. CLEAR will not offer a blanket approach but classify villages into categories of nutritional problems and opportunities. This means, that each village will receive a tailored approach based on needs, resources and aspirations by villagers. For villages with high levels of food insecurity special support will be provided to vulnerable households.

1.2. Purpose and Scope of the Assignment⁵

The World Bank and PRF held various review meetings as well as in-person and phone interviews with farmers provided the project with some preliminary results on what worked under the PRF III AF and what not. The Lao Farmer Network and Click was contracted to start collecting data on home nutrition gardening for 7 crops (e.g. germination rates, what crops grow well, etc.) and will collect for 11 more crops after completion of the planting cycle in 2022.

However, a **more detailed understanding of the PRF III AF nutrition activities was needed in order to inform the CLEAR project design**. Building on the preliminary understanding which the PRF has generated up to date, **the nutrition assessment was organized into four main parts and six themes:**

Four main parts:

- Part 1: Implementation and results against design (what worked and did not work; what were the success factors/barriers, etc.);
- Part 2: Scale-up and amendments of the activities under CLEAR;
- Part 3. Monitoring the nutrition related activities;
- Part 4: Gaps and new opportunities.

⁵ Term of Reference from RFP package

Six Themes:

The survey instrument to be developed by the consultants should include at least the following six themes:

Theme 1: Social and behaviour change communication. What behaviors/norms changed? What benefits were experienced? Who are the early adopters, who hold back, why? What other topics should be included in the SBCC strategy?

Theme 2: Household food production, wild food collection and buying food. Which of the 18 crops were planted, what techniques were applied? Is seed production taken up? Does the model-farmer approach work? Are gardens included in village development plans? Did women cook with the promoted crops? What is the potential for promoting goat milk? What are the key food and nutrition security issues at household level, what coping mechanisms exist? Did villagers buy more food after income was increased?

Theme 3: Food processing (scaling -up premix). Would there be a demand by women to buy any of the premixed food or fish powder products? What would they be willing to pay? Who can produce and sell? What would the pre-mix business model look like?

Theme 4: Food and water storage. What traditional storage techniques exist? What are they key food storage problems, what are potential solutions? How does water scarcity affect impacts on WASH and nutrition in water-scarce areas? How could water efficiency and storage be improved?

Theme 5: Linking nutrition and other PRF components. What linkages were established between nutrition and livelihood and infrastructure activities? How could such linkages be strengthened? What obstacles are there to increase these linkages? How could village authorities be involved?

Theme 6: Vulnerability and inclusion. Did the poorest 1,000-day women benefit from the nutrition activities? How do women workloads affect nutrition, what could be done to overcome this obstacle?

1.3. Methodology

The assessment was centered around the OECD⁶ evaluation framework:

Relevance:	Is the intervention doing the right things? The extent to which the intervention objectives and design respond to beneficiaries', country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.
Coherence:	How well does the intervention fit? The compatibility of the intervention with other interventions in a country, sector or institution.
Effectiveness:	Is the intervention achieving its objectives?
Efficiency:	How well are resources being used?
Impact:	What differences does the intervention make?
Sustainability:	Will the benefits last?

The assessment uses primary and secondary data collection methodologies whereas the primary data was obtained via the interviews conducted at the selected districts and villages and the secondary data was gathered from the existing literatures and reports produced by other development partners, and government's websites.

⁶ The Organization for Economic Co-operation and Development Evaluation Criteria and Principle

Desk Review: The main purpose of the desk review was to take stock of lessons learned from other projects in Lao PDR on changing nutrition behaviours, household food production, processing and storage and other factors influencing nutrition behaviours and measuring nutrition outcomes. Secondly, trends in recent statistics on nutrition indicators at national and province levels were also reviewed. Secondly, trends in recent statistics on nutrition indicators at national and province levels were also reviewed. Apart from looking at the PRF's online MIS system, national policies, national statistics and reports, national nutrition and health strategy are reviewed.

Interviews: The Term of Reference for this study describes a focus on qualitative interviews with a wide variety of stakeholders, going in depth into six major themes. Some stakeholders were better interviewed in Small Discussion Groups (SDGs), others are more suitable to be interviewed individually in Key Informant Interviews (KIIs). The table below describes how the different themes were covered in group and individual interviews between all stakeholders:

Table 1: Matrix for covering the six themes of the survey between 17 different types of stakeholders

No	Stakeholder	Group discussion	Individual interview	Theme 1: SBCC	Theme 2: Sourcing	Theme 3: Processing	Theme 4: Storage	Theme 5: Linkages	Theme 6: Inclusion
A	Direct Participants								
1	FNG Whole Group	x		x	x	x	x	x	x
2	FNG committee	x		x	x	x	x	x	x
3	Village SHG Management Committee (VSMC)	x		x				x	x
4	Home Garden + goat pilot farmers	x		x	x	x	x	x	x
5	Video club members	x		x	x				x
6	Pregnant women		x	x					x
7	Women with young children		x	x	x				x
8	Adolescent girls		x	x	x				x
9	Poorest FNG members		x	x	x				x
B	Wider participants								
1	elders/influencers	x		x	x				x
2	village authorities	x		x	x			x	x
3	shopkeepers		x	x	x	x	x		x
C	Outside village/District Level								
1	District market traders		x	x	x	x	x		x
2	DAFO District Staff		x	x				x	x
3	DHO District Staff		x	x				x	x
4	NGOs		x	x				x	x
5	Development Partners		x	x				x	x

The survey team was divided into two groups (Oudomxay and Xiengkhouang teams). The semi-structured interviewed started with village authorities, which also served to verify the right group of participants. Later, a larger group meeting was held with FNG members, aimed at eliciting members own assessment of the nutrition activities and their impact. Simultaneously, four subgroups (Village Self-help Group Management Committee, model farmers/goat diary, elders/influencers, and video club) as well as individual interview with key informants

were interviewed. Followed the FNG interview, the team visited home garden and goat dairy activities to assess the implementation progress.

In each district, the team met and interviewed PRF district teams and staff from agriculture and health departments. This is estimated to take about 2-3 hours per district.

Sampling Selection:

The PRF nutrition program cover four provinces: Phongsaly, Oudomxay, Xiengkhuang and Huaphanh. Some of the nutrition activities e.g., **goat dairy pilots were only implemented in two provinces: Oudomxay and Xiengkhuang.** These two provinces are therefore selected for the rapid nutrition assessment. In each of these provinces, the nutrition program covers two districts: Namor (14 villages) and La District (5 villages) in Oudomxay Province and Kham (29 villages) and Nonghet District (36 villages) in Xiengkhuang Province. These four districts are therefore selected as target districts for the rapid nutrition survey.

In each province, five villages were selected for the survey on the basis of the following **criteria:**

- At least two dairy pilot villages per province;
- At least two villages per district;
- Covering a range of poor, less poor and well-off villages. The villages were ranked into three categories based on percentage of poor households per village: a poor village meaning 50-100% poor households, a less poor village meaning 25-49% poor households and a well-off village meaning less than 25% poor households;
- Covering diverse ethnic groups.

For Oudomxay Province, the team selected three villages in Namor District (Na Savang, Pangsa, Nam Nguen villages) and two villages in La District (Phonxay, Buam Som villages).

For Xiengkhuang Province, the team selected three villages in Kham District(Yumchong, Som, Nongmai Korkhai villages) and two villages in Nonghet District (Houailom, Kangpanian villages).

1.4. Limitations

- With limited time for field survey, the team selected easy access villages but still maintained the sampling selection criteria.
- Prior to this field survey, there were other field assessment teams on various topics as well as mid-term review mission from the World Bank team visited the same villages and this seems to exhaust the villagers.

2. Key Findings and Analysis

2.1. Desk Review

2.1.1 Global and Regional Context

It was reported in the Global Nutrition Report 2022 that the global nutrition crisis has worsened due to the Covid-19 outbreak resulting in an increase in number of hungry persons from 618million in 2019 to 768 million persons in 2021. In 2020, the number of persons who are unable to afford a healthy diet rose from 112 million to 3.1billion. 29.3% of the world’s population were classified as moderately or severely food insecure⁷. During the Tokyo Nutrition for Growth (N4G) Summit, an amount of \$42.6 billion were committed by 84 countries on Nutrition Accountability Framework as a joint effort to improve malnutrition; 41% of funding will be spending on maternal, infant and young child nutrition targets. The following figure shows the overview of commitment goal types, by nutrition action category and sub-category:

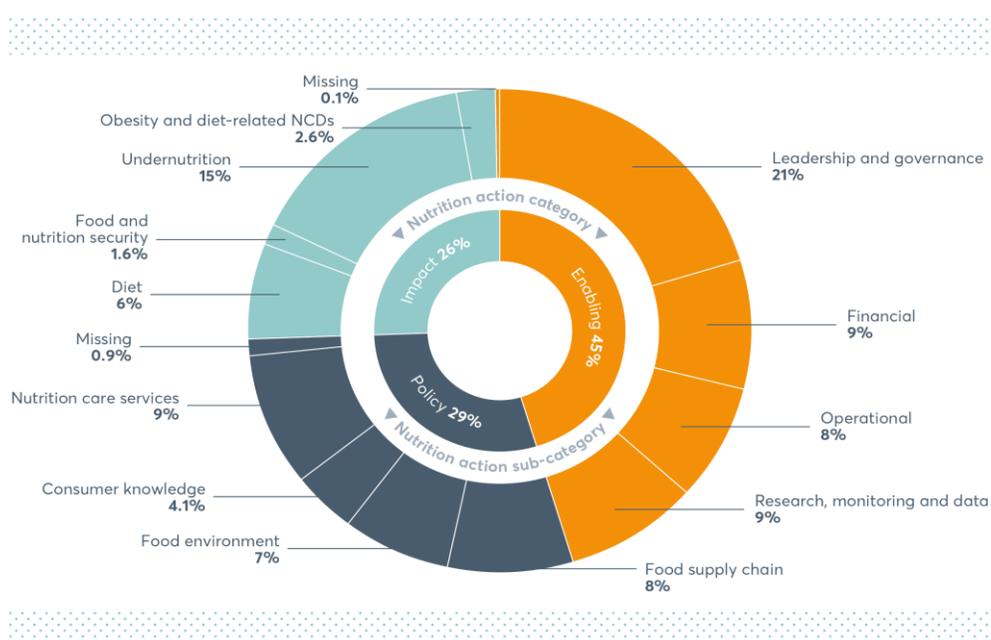


Figure 2: Overview of Commitment Goal Types, by nutrition action category and sub-category

Source: The Global Nutrition Report, 2022

Table 2: Malnutrition Figures in Some ASEAN Member States⁸

Country	Stunting (CU5)	Wasting (CU5)	Severe wasting (CU5)	Low birthweight	Anaemia (children aged 6-59 months)
Cambodia	32.4%	9.7%	2.5%	12.1%	55.5%
Indonesia	27.7%	7.4%	1.7%	6.2%	38.5%
Laos	33.1%	9%	3%	17.3%	44.1%
Myanmar	26.7%	6.7%	0.8%	12.3%	35.6%
Thailand	13.3%	7.7%	2.7%	9.5%	23.8%
Vietnam	19.6%	4.2%	1.2%	8.2%	19.6%

⁷ <https://globalnutritionreport.org/reports/2022-global-nutrition-report/executive-summary/>

⁸ ASEAN Food and Nutrition Security Report 2021 Volume 2 Food and Nutrition Security Country Profiles

From the regional data above, it can be seen that Lao PDR has the highest prevalence on stunting and wasting of children aged under 5 years old. Malnutrition is an important national policy priority. The Government has been following a National Nutrition Strategy since 2015 to address the issue but faces limited financial resources. Numerous foreign aid donors support the Government financially in the implementation of this strategy. The strategy is based on a multi-sectoral convergence approach to align the implementation arrangements on the ground to ensure synergy.

2.1.2 National Context

Lao PDR has been facing high prevalence of child undernutrition with a national average of 33 percent⁹. Figures from the Laos Social Indicator Survey (LSIS), 2017 showing stunting rates of children under five are higher in provinces like Phongsaly (54 %), Sekong (49.9%), Xiengkhuang (48.3 %) and Huaphanh (40.7 %). The stunting prevalence among children in poorest wealth quintile (48% stunted) are more than three times the rates for children in the richest quintile (14%), and ethnic groups (e.g. among Hmong-Mien reaching 50%). Food insecurity remains a critical issue in Lao PDR; a situation which was exaggerated by the COVID-19 pandemic. Round 5 of the World Bank’s rapid phone survey in May 2022 reported an increase in severe food security; and about 65 percent of households reporting on some sort of food insecurity.

The World Bank and PRF have been experimenting with multiple instruments to assist the country in reducing malnutrition in the last decade from the Livelihood Opportunities and Nutrition Gains project back in 2012 to today’s multi-sector convergence approach that combined food production, healthy food consumption and preparation practices, childcare practices, access to healthcare, access to early childhood education, access to basic infrastructure (roads, bridges, irrigation, water supply and latrine), access to cash/social production and access to information. It is a joint effort between the key relevant sectors (Health, Agriculture, Public Works, Labour and Social Welfare, and Education) for this multi-sector convergence approach. The World Bank and the Government of Lao PDR jointly decided to bring this approach to four northern provinces: Phongsaly, Oudomxay, Houaphanh and Xiengkhuang. Apart from the World Bank, other development partners also join in the efforts to reduce child malnutrition age under 5.

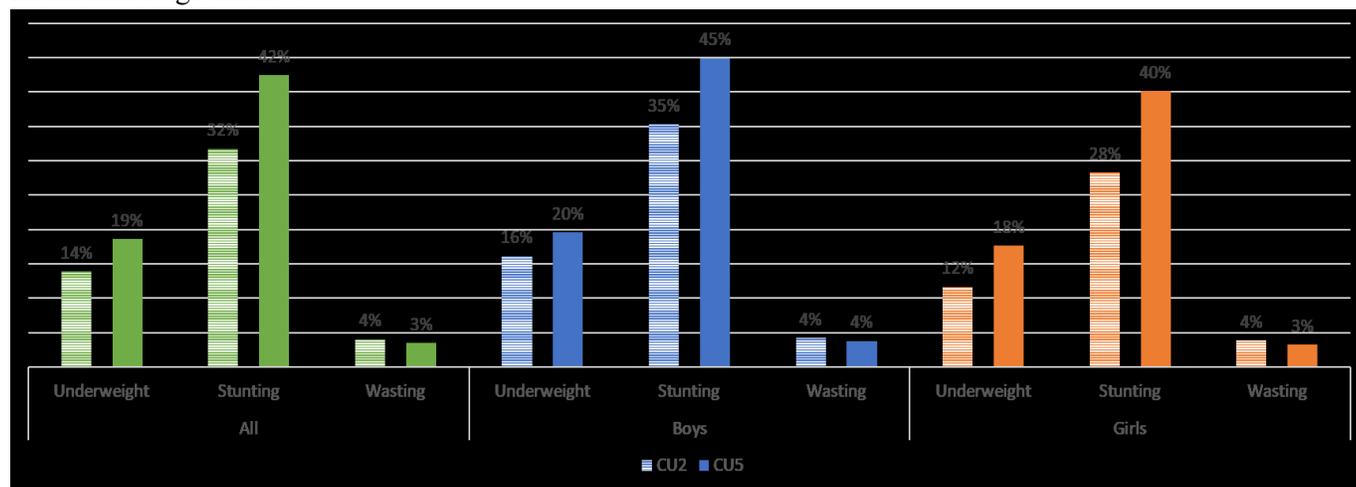


Figure 1. Malnutrition in children under2 and under 5 years of age (-2SD from WHO mean values for age and sex) in World Bank’s four convergence provinces (12 Districts).

⁹ Laos Social Indicator Survey (LSIS), 2017

The following table summarizes the efforts through project instruments from different development partners in Lao PDR:

Table 3: Nutrition Related Projects

No	Project Name	Funding/Implementer	Interventions
1	Enhanced Nutrition for Upland Farming Families (ENUFF)	Donor: SDC Implementing Agency: SNV & Agrisud International Implementing Partners: PAFO, PHO Funding: CHF 7million Phase I (2-17-2020), Phase II(2020-2024)	Nutrition-sensitive agriculture: Food Production and diversity for consumption SBCC: Nutrition Education and feeding practices Income generation: short value chain activities for income generation Target Province/District: Huaphanh-Xiengkhor, Viengxay Oudomxay-Nga, Beng. Target beneficiaries: 4000 farming families in 40 villages in phase I. Expanding to another 20 villages in phase III covering about 6,000 households of 34,000 beneficiaries including 16,000 women. ¹⁰ Key nutrition related results: Stunting rate reduction of children under 5 from 42.5% to 37.7% (in target areas), CU2 receiving 4 meals per day from 14% to 66%.
2	Poverty Reduction Fund Phase III Additional Financing (PRF)	Donor: The World Bank Implementing Agency: MAF/PRF Implementing Partners: PAFO, PHO Funding: \$22.5 million (2019-2024)	The project continues to support rural community infrastructure development, local governance and capacity building with additional component on nutrition enhancing livelihood development. ¹¹ Target Province: Phongsaly, Huaphanh, Oudomxay, Xiengkhouang Key results: Covers 231 villages, 460 Farmer Nutrition Groups with 17,898 members, of which 10,105 mothers and 7,793 children aged 0-23 months ¹² .
3	Scaling-Up Water Supply, Sanitation and Hygiene	Donor: The World Bank Implementing Agency: The Ministry of Public Works and Transport, Ministry of Health Implementing Partners: Provincial Health and Public Works Offices. Funding: \$25 million (2022-2024)	The project aims to provide access to improved water supply, sanitation and hygiene services in selected areas identified for nutrition convergence, and strengthen capacity of select institutions to improve service delivery. ¹³ Target Province: Phongsaly, Oudomxay, Houaphah, Xiengkhouang Key results: Survey on water supply is ongoing.
4	Reducing Rural Poverty and Malnutrition Project (RRPMP)	Donor: The World Bank Implementing Agency: Implementing Partner: Funding: \$27 million	The project was created to support the design and implementation of a nutrition-sensitive social assistance program to improve nutrition behaviors, and enhance the convergence of nutrition-focused interventions. ¹⁴ The main feature of this project is the cash transfer mechanism where villagers are very

¹⁰ Technical Brief No. 01, ENUFF project, SNV

¹¹ Project Paper on a proposed additional credit for PRF, 2019

¹² <https://prfmis.org/#/>

¹³ <https://projects.worldbank.org/en/projects-operations/project-detail/P164901>

¹⁴ <https://projects.worldbank.org/en/projects-operations/project-detail/P162565>

			much appreciated as this helps to access to food, transportation cost to healthcare facilities.
5	Health and Nutrition Service Access Project (HANSA)	Donor: The World Bank (and multidonor trustfund) Implementing Agency: Implementing Partner: Funding: \$36 million (2020-2025)	The HANSA Project is aimed at ensuring access to quality healthcare and nutrition in the 14 target provinces of Lao PDR. The project integrates service delivery performance with national health insurance payment which also links to the indicators of convergence approach on nutrition ¹⁵ .
6	Agriculture for Nutrition	Donor: IFAD/GAFSP Implementing Agency: MAF, World Food Program Implementing Partner: Provincial and District Agriculture Offices Funding: \$38.8million (2016-2022, Phase I), \$48.2 (2023-2029, Phase III)	The project is a nutrition-sensitive agriculture project to address food insecurity and malnutrition among the rural poor through promoting small and medium-scale agricultural development, including through home gardens ¹⁶ . Target Province: Phongsaly, Oudomxay, Xiengkhouang, Salavanh, Sekong, Attapue Targeting 28,000 households in total for Phase II.
7	The Community Maternal, Child Health and Nutrition Strengthening project	Donor: USAID Implementing Agency: UNICEF, MOH Implementing Partner: PHO, DHO Funding: \$2.8million (2020-2022)	The project will improve the health and nutrition of mothers, newborns, children and adolescents from twelve districts in four provinces: Khammouane, Savannakhet, Salavanh and Attapeu. ¹⁷
8	Capacity Strengthening for Maternal Child Health and Nutrition Project	Donor: USAID Implementing Agency: JSI Research and Training Institute, Inc, MOH Implementing Partner: PHO, DHO Funding: NA (2023-2028)	Project aims to improve health and nutrition outcomes among pregnant and postpartum women, newborns, children, and adolescents in hard-to-reach communities in 24 districts of the five provinces of Phongsaly, Oudomxay, Savannakhet, Salavanh, and Sekong.

We can see that Phongsaly, Oudomxay and Xiengkhouang were the most covered in the northern provinces and Salavanh, Sekong and Attapue in the southern provinces. As it can be seen in the table above, the funding support to the multi-sector convergence approach alone is almost \$180 million combining with the IFAD and USAID funding, the total would reach \$250 million. The World Bank is the single largest donor, covering over \$100 million spread over four programs. Among these, PRF and RRPM programs have a specific nutrition component aimed at Social and Behavior Change and convergence between health, agriculture and education sectors. Whereas the RRPM focuses on conditional cash transfers linked to mother and child health monitoring practices, the PRF-III project focuses on changing cooking behaviors for feeding infants in the 1,000 days window. PRF is the only project that links rural infrastructure to nutrition activities; its nutrition component is also very unique and well-known for being innovative on women led farmer nutrition group, video filming club, goat milk and instant porridge powder.

Barriers to Accessing Nutrition Services at Community Level: According to the case study of Bolikhamxay Province conducted by UNICEF Laos with the funding support from the European Union, the challenges in

¹⁵ Project Social Assessment Report, 2019

¹⁶ <https://www.ifad.org/en/web/latest/-/new-ifad-and-gafsp-funded-project-to-scale-up-successful-approaches-to-increasing-food-and-nutrition-security-and-increase-small-scale-farmers-incomes-in-lao-pdr>

¹⁷ <https://www.unicef.org/laos/press-releases/usaids-and-unicef-increase-efforts-improve-community-health-and-nutrition-key-target>

implementing the National Nutrition Policy (NNP), National Nutrition Strategy (NNS) and Plan of Action (NNSPA) are inevitable due to insufficient financial and human resources on the ground especially the remote areas where healthcare services are still limited. A lack of human resource such as no nutrition or food science degrees are provided in the country resulting in a shortage of trained nutrition personnel who could build local capacity to provide nutrition education to mothers in the remote areas. At community level, there knowledge on nutrition is very limited topping up with the ethnolinguistic context and culture which hinder the access to information due to language and beliefs barriers.

2.2. Field Survey

Table 4: District Profile

Province	# of village cover by PRF	# village selected for this survey
Oudomxay		
Namor District	14	3
La District	5	2
Xiengkhouang		
Nonghet District	36	2
Kham District	29	3
Total	84	10

Table 5: Village Profile

Province/District	Village Name	Profile	No. of FNG members
Oudomxay, Namor	Na Savang	Lue ethnic, poor, goat dairy pilot	69
Oudomxay, Namor	Pangsa	mixed Lao Tai/Khmu/Hmong/Phunoi, poor, goat dairy	51
Oudomxay, Namor	Nam Ngeun	Khmu ethnic, well-off	65
Oudomxay, La	Phonxay	Khmu ethnic, poor	31
Oudomxay, La	Buam Som	Khmu ethnic, poor	44
Xiengkhouang, Nonghet	Houailom	Hmong ethnic, poor	30
Xiengkhouang, Nonghet	Kangphanian	Hmong, well-off	44
Xiengkhouang, Kham	Yumchong	Lao ethnic, poor, goat dairy pilot	26
Xiengkhouang, Kham	Maikorkhai	Kham district, Khmu/Hmong ethnic, well-off, goat dairy pilot	56 (in PRF database = 14)
Xiengkhouang, Kham	Som	Lao Tai/Khmu/Hmong ethnic, medium	42 (in PRF database 61)

Table 6: Respondents

Province	Total # respondents	Female respondents	% female respondents
Oudomxay Province	165	141	85%
Xiengkhouang Province	174	137	79%
Total	339	279	82%

The following sections summarized the key findings from the field interviews:

2.3. Social Behavior Change and Communication (SBCC)

Farmer Nutrition Groups (FNG) are the main instrument for social behavior change communication in the PRF-III AF nutrition component. The group includes pregnant women and mothers with children in the first 1,000 days of age. Adolescent girls and grandmothers often joined in the training and cooking activities. The SBCC were organized in a practical and inclusive way through the following sets of activities:

- 1) Multi-Media Peer Learning (MMPL). This consists of two elements:
 - a. Formal Nutrition Training Sessions, using posters, handouts and lectures
 - b. Video clubs, recording and sharing videos on nutrition, food production/processing
- 2) Introducing ready-to-eat porridge and other foods for infants with time-saving ingredients:
 - a. Frequent communal cooking sessions
 - b. Pre-Mix of rice and mung bean powder for rapid preparation of porridge
 - c. Fish/frog powder as a protein-rich supplement to porridge or other meals
 - d. Adding milk to porridge (cow and goat milk)
 - e. Trying out a range of recipes prepared by the National Nutrition Center (NNC), Ministry of Health
- 3) Home Nutrition Gardens (HNG), introducing a large range of nutritious vegetables and fruits
- 4) Dairy Goat Pilots, milking local goats to produce a protein-rich supplement

The assessment on SBCC activities were conducted through (i) focus group interviews with FNG, elders, village administration, video club members, HNG and goat raising group; and (ii) key informant interview with individual mothers, pregnant women, and adolescent. The discussions were centered around what went well, what weaknesses they perceived and whether they observed any changes in behaviors as a result of the above-mentioned interventions.

The following paragraphs provide detailed findings of the above activities:

2.3.1 Multi-Media Peer Learning

A: Formal Nutrition Education

Formal nutrition education sessions follow the curriculum of the Ministry of Health where posters, handouts, photos, and recipes were used to provide information on child feeding practices, nutrition, mother and child care, hygiene practice, and vaccination. After information session, the FNG members will continue with communal cooking where mothers and children aged under 2 years could eat together. The sessions firstly led by provincial or district health office as a training to trainers (the young graduates/village facilitators/village volunteers).

From the interviews, the results are as follow:

What is going well?

- The training is well appreciated in all 10 villages, also pregnant adolescents and grandmothers attended.
- FNG members stated that they understand better on need of six food groups for the daily healthy diets, hygienic feeding practices and the importance of regular child growth monitoring.
- All 10 villages, women found it more effective to learn how to cook together and watch videos.

What could be improved?

- In 08 out of all 10 villages, women asked for more training on how to take care and feed children beyond the 1000 days window (over two years old).
- To foster the success of learning by watching videos produced by themselves, the multi-media peer learning team needs to be creative on their contents and visuals.
- In 08 out of 10 villages, women mentioned that they would like to be trained on snacks processing so that they could save money on buying snacks, avoid junk food consumption and could possibly be small income generation for women.

What changes in behaviors can be observed?

- 70% of mothers eat better and more diverse food themselves, which makes them healthy and strong. More than 4 food groups were mentioned for their daily diets.
- Mothers who eat better have more milk making their babies grow faster.
- 100% of mothers from FNG know how to prepare separate food for children such as porridge with eggs, oil and vegetables, which they did not do previously.
- Also ,through the HANSA project mothers learnt to take children for vaccination and have their children’s weight and height monitored regularly by themselves and district health officials (recorded in the pink

“ PRF’s nutrition activities help us understand more about nutrition, I have noticed that my wife cooks more variety of dishes with eggs, fish, vegetables and oil for me and my children. “Chief of Som village commented.

“ By attending nutrition information and cooking sessions, I have managed my kitchen better with good hygiene practices” FNG member at Maikorkhai village.

books).

Overall assessment of the formal nutrition training activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: training responds to a clear need of mothers who worry about child nutrition	Good: content follows Gov. guidelines and fits District Development Policies	High: in all 10 villages FNG members said it improved their understanding	Medium: HANSA project posters and leaflets good for improving knowledge, less for skills	High: Women say it changed their cooking and hygiene habits, leading to better mother and child health	Women are confident that if the project closed, they will continue to cook together as it has become their peer support mechanism

Advice for CLEAR design: the new program should continue to integrate this formal nutrition training with practical cooking sessions. High frequency of training visits should be maintained.

B: Video Clubs

In all 10 villages, groups of 3-4 young mothers were provided with a mobile phone, a pico-projector and some support for mobile data credit . They were trained to take and edit videos using a mobile application called Kinemaster. They shared these videos within their FNG members and upload them on social media such as Facebook, WhatsApp and Tiktok, sharing them with other villages.

What is going well?

- In all 10 villages, video teams have produced an average of 8 stories and shared them online
- People are excited to share videos with the community and other villages
- Sharing of videos develops into an intra-village information network
- Videos are the preferred method for FNG members to look up new recipes and cooking instructions. It also serves as memory book when they forgot a recipe, they can always watch it again.
- The use of videos inspires users to look for more information in Thai language on the internet
- The Kinemaster program is easy to use and works well.

What could be improved?

- Pico-projectors are a good start to get people to gather and watch the videos they produced; however, the pico-project requires a complete darkness to see anything. In addition, the projected screen is too small and the picture resolution is low. Note: Members were also trained to share via social media (Facebook, WhatsApp)
- FNG appreciates the support on the equipment to get them start learning and making videos; however, the mobile phone could only produce low quality videos.
- The mobile phone was usually with the team leader, if she was not around, no one could use the phone. The person inserts her own simcard, refill the credit and use it as a personal phone; resulting in sharing limitation.
- Content produced so far is limited to topics prescribed by project, there is a lack of creativity.

What changes in behaviors could be observed?

- People apply new recipes and food processing methods learned from the videos
- People prefer to learn from videos, rather than from looking at posters or leaflets especially in Hmong ethnic group where they could not speak or read Lao.
- Videos are exciting and draw children, adolescents and grandmothers to FNG meetings.

“ The videos are made in our own language, it is so easy to follow and I like watching them.”
FNG member from Khangpanian Village.

Advice for CLEAR design: Home-made videos are popular and instrumental in scaling up new recipes and food processing methods. Sharing videos has become a cost-effective intra-village information network which could be enhanced by supporting more creative content development. This activity should be maintained in the existing project villages and scaled up in the new program, with better phones and projectors, a clear policy for supporting internet credit and a clear policy on shared use of equipment.

Overall assessment of the video club activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: video sharing makes it easy for women to adopt new practices	High: First project supporting peer learning through mobile phones/video	High: in all 10 villages FNG members said it improved their understanding	High: video sharing becomes a cost effective and powerful intra-village information network	High: Women said it changed their cooking habits, leading to better mother and child health	High: FNG members stated that they will continue to produce more videos after project closing

2.3.2 Introducing porridge and other foods for infants with time-saving ingredients

A: Frequency of cooking sessions and program support mode

What is going well?

The FNGs met very frequently, up to 6-8 times per month in the first year, 2-4 times per month in the second year of the program.

This was possible due to the combination of financial support from the PRF and the training support provided by Nutrition Young Graduates. In all 10 villages, this approach is highly appreciated and seen as a very effective way to induce nutrition behavior change.

What could be improved?

The activity depends highly on the project support. When the project ends, better-off households are likely to continue producing special infant food at home, but perhaps not in a group. Poor households will not be able to do so without project support.

What changes in behaviors could be observed?

Due to the frequent communal cooking sessions, almost all members of FNGs have started to cook porridge for their children regularly.

Grandmothers, who are both influencers and caregivers, say that they used to pre-chew sticky rice to feed weaning infants, but now they prefer to give porridge to such children.

“ My daughter-in-law stops me from chewing rice to her babies and replaced with read-to-eat mung bean porridge powder mix instead .” A grandmother from Houailom Village, Nonghet.

Advice for CLEAR design: The NYG mechanism and the high frequency of meetings it allows for is crucial for success and should be scaled up. Communal cooking should always be done in the first year of the project to achieve behavior change. After the first year, communal cooking groups could continue with a special focus on the poorest households to ensure they can have access to the inputs needed to provide infants with special foods. Combined financial support from both PRF and RRPM should be maintained.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: frequent meetings address needs of women to learn better nutrition practice, saving time and motivating each other	High: fits to district nutrition strategy, national nutrition strategy and plan of action 2025	High: enables rural women to change behaviors, learning by doing	High: NYG provide a low-cost mechanism for very frequent training and coaching support to rural mothers in their villages during cooking session	High: women said they now cook porridge for infants frequently, before project they did not do so.	Medium: well-off households can continue cooking porridge, but poor households cannot afford to buy the inputs needed without project support

B: Pre-mix of rice and beans

What is going well?

- The rice-beans pre-mix powder is very popular among FNG members in all 10 villages because it is convenient, easy to prepare, have longer shelf life and most of all children love it.
- 100% of all FNG members stated that their children grow faster and healthier as it was evidently that the frequency of their children visiting hospital has been reduced tremendously. Some mothers said their children who eat porridge regularly become smarter earlier and learn faster.
- Elders and village authorities also conveyed the same message that children grow faster, smarter and healthier.
- Mothers have been creative lately in experimenting with fruits, dried vegetable powder and egg. It was found that children love the fruits with porridge recipe.

What could be improved?

- Pre-mix requires almost all inputs to be bought, as white rice and green beans are not available in most villages (except for Hmong ethnic villages, who produce non-sticky rice (*Khao Jao Hai*) as their staple). This means households can only continue producing pre-mix powder to make porridge as long as they have money to buy such ingredients. As the PRF is also experimenting with alternatives the YNGs shall follow up closely and keep records on this and disseminate with the full PRF team
- Mungbeans now are getting more expensive. People will prefer to buy meat instead of beans if they have little money. Better-off households are experiencing a reduction of income because of the economic crisis of 2022. Poor households cannot buy any of these inputs without project support.
- Experimenting with different ingredients to see the results.
- There could be a scope for rural entrepreneurs to produce and sell ready-made pre-mix, but it is not sure if there is sufficient market demand.

What changes in behaviors could be observed?

- 100% of mothers in all 10 villages prefer this premix porridge. The adoption rate is very high where mothers now produce porridge 2-4 times per week.

- In all 10 villages, FNG members said this is the single most important nutrition behavior change.
- A proper analysis of child growth data which have been collected could shed more light on actual impact on child growth and health indicators of children who eat porridge and those who do not.

“ My second child grows so well, he is taller, healthier and smarter than my first child after the PRF project reaches my village .” FNG Management Committee Member at Youmchong village stated

Advice for CLEAR design: This is the single most important activity changing child nutrition behaviors. The concept should be scaled up and development of recipes for enriching porridge should be scaled up as well. The video networks now existing between villages has great potential to continue the development of recipes for enriching porridge with essential nutrients, adapted to local tastes.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: it reduces the key issue of weight loss in babies who wean off mother-milk (6-12 months)	High: this activity is aligned with MOH’s recipes and national nutrition strategy 2025	High: Very good adoption rates in all 10 villages	Medium: The intervention relies on inputs that need to be bought. There is room for improvement by just providing alternative beans/ingredients with lower cost solution.	High: mothers see a clear impact on infant growth rate and health	FNG members and village authorities stated that this activity will be continued as they saw a huge impact on their children growth

C: Fish/frog powder

What is going well?

- Fish/frog powder is appreciated similarly to rice-beans pre-mix powder for saving time in food preparation and adding proteins to infant porridge. Children love eating it.

What could be improved?

- In all 10 villages the main bottleneck in fish/frog powder production is a lack of glass jars and lids, limiting the ability of households to store fish powder. In three out of five villages in Xieng Khouang, there were also problems of fish powder molding in jars when kept for only 3 days.
- There is limited supply for glass jars and lids in Lao PDR and it is an expensive packing material. Cheaper alternatives such as resealable bags, already used to pack coffee, tea and other dried export products could be explored.
- Fish powder, if not grind finely could be a bit hard for babies to consume.

- The fish/frog powder can cater local taste really well, however, in some area such as Nonghet district in Xiengkhouang province and could possibly in the mountainous terrain area with similar weather and scarcity of water resource; it is difficult to find or buy fish and frog. Alternative options for instant protein sources such as preserving dried pork meat, Sacha Inchi nuts could be explored.

What changes in behaviors could be observed?

- Especially in Oudomxay, FNG members have adopted the use of fish powder as an additive for infant porridge. Mothers say children grow faster and have better health due to eating fish powder.

“ Fish is difficult to find in Nonghet, it is yet very expensive to buy.” A mother of a ten-month-old baby in Houailom village.

Advice for CLEAR design: The new program in the south of Laos could explore the support of fish powder value chain, based on the existing dried fish production capacity in Champasak province. For the northern provinces, in areas with low availability of fish, other source materials should be explored or the supply in Kham or Phonsavanh Districts as supplier. For packaging, the program should explore the use of resealable bags and vacuum packing as a cheaper alternative to glass jars.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: fish powder adds protein to infant diets, crucial for growth of muscles and bones	High: Aligns with protein consumption promotion of MOH	Medium: good adoption rates in Oudomxay, less in Xiengkhouang, due to availability of fish and frog.	Medium: lack of affordable packaging limits adoption.	High: children who eat fish powder grow faster and are less sick. Promote protein consumption.	Medium: fish is an expensive food item; economic crisis may limit sustainability

D: Adding milk to porridge

What is going well?

- This recipe is very well received and has high impact on behavior change due to high adoption in the infant feeding at home because package cow milk could be purchased and found at the local shop at an affordable price. Children also love goatmilk porridge.
- Goat milk is also well received by the villagers especially the goat milk omelet recipe and pancakes. This initiative serves the purpose of promoting milk consumption and it does the job well.

What could be improved?

- All mothers appreciate this recipe very much and said no improvement is needed except the milk availability i.e. goat milk.
- Apart from using milk in the porridge, the project could explore more recipes that uses milk for both children and adult to consume.

What changes in behaviors could be observed?

- All respondents stated the same that their children grow faster as it can be seen from their pink book that their weight are beyond standards. The attribution to this may be the simultaneous benefits from the other WB convergence projects

Advice for CLEAR design: Milk porridge is a very good recipe and should be kept as one of the activities to promote milk consumption. More recipes can be introduced with milk as one of the ingredients.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: Very relevant to the six food group consumption movements	High: the villagers and children love this recipe and it is in the recipe of MOH too	High: The execution of this milk porridge activity is well organized	High: Cow milk can be bought (125ml = 4000LAK) which is still affordable.	High: This changes the behavior and understanding of milk feeding to children	High: This is an affordable recipe that can be prepared at home and mothers and villagers are now very much familiar with milk consumption

2.3.3 Nutrition Home Gardens

What is going well?

- Home gardens are a common feature in all 10 villages visited. People like eating vegetables and are interested in trying out new varieties.

What could be improved?

- The main intervention was to support 3 households per village to try out 18 nutritious vegetables. In all 10 villages, very few of the crops tried by the three households were successful. There was no visible adoption by other households. Many products failed as they did not fit the climate, others were abandoned as people did not like the taste. This intervention did not work very well.
- In 8 of the 10 villages, people complain about lack of water in the dry season for growing vegetables. People request support for micro-irrigation schemes for groups of households farming together.

What changes in behaviors could be observed?

- There is a great interest in home gardens, but there was little adoption of the new crops introduced. In some villages, women said that the technical advice received on vegetable gardening made them realize they could earn money with it.

Advice for CLEAR design: Review the extension package for cultivation of nutritious vegetables. Much more could be done to address water shortages in villages, linking water supply and nutrition, e.g., through micro-irrigation systems for horticulture.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: vegetables are a popular food and can contribute to improved infant nutrition	High: fits to the nutrition strategy of districts	Low: very few of the 18 recommend crops grew successfully	Low: There is no visible impact of adoption of new varieties	None. No impact on child nutrition from new crops so far	Yes/no: people will always have gardens, but adoption of new crops requires more work

2.3.4 Goat Dairy Pilots

What is going well?

- Mothers and grandmothers who tried out feeding goat milk to infants are very enthusiastic. They say both mothers and children love eating goat milk processed in pancakes and omelets. They say its consumption makes children grow faster and learn faster.
- Mothers buy goat milk from goat milk providers.
- The success of this initiative is the milk consumption promotion

What could be improved?

- In four pilot villages that the team visited , it is observed that there are not enough goats to feed all infants. A typical herd of 20 goats may have 10 female goats, of which only 2 are lactating. The milk produced by one lactating goat can provide just enough milk for one or two infants. An average village of 130 households may have 20 infants in the age of 6-23 months. It will be difficult to increase the goat herd size tenfold due to limitations of the terrain.
- Respondents stated that the limited goat milk leads to less sharing as the farmers who produce the milk would keep for their own family consumption more than the need to sell.
- Options for increasing goat milk by introducing dairy goat breeds could be explored by households willing and able to put in the additional labor required to feed such goats every day.
- The interest in dairy products makes people buy any type of milk, also coffee sweetener and other types of dairy products that are not suitable for infant feeding. More extension is required to make mothers be aware of the nutritional benefits and hazards of various types of dairy products.
- If we could promote the goat dairy by supporting young entrepreneurs at the villages to operate a proper goat dairy with training from Lao Buffalo Dairy, it could increase the volume of milk to supply in the village.

What changes in behaviors could be observed?

- Mothers and grandmothers who tried out feeding goat milk to infants see better child growth, learning and health.
- Households buy less cow milk if there is goat milk as the price of set for the goat milk of 30,000 LAK for one liter is reasonable.
- Mothers who tried feeding infants with goat milk want to get milk more often.

Advice for CLEAR design: Dairy products remain a very effective way to enrich infant diets. Local goats cannot provide enough milk, but goat dairy pilots can raise awareness on the benefits of dairy. They should be accompanied by a good education program that explains the benefits and risks of all “milk” products available on the market. In areas where farmers are already practicing cut and carry systems for cattle, e.g., in Nonghet district, Xieng Khouang, a parallel program introducing dairy goat and cattle breeds could be piloted.

“ We never had goat milk before, once we tried them we like the taste and the omelets recipe very much.” A mother from Na Savang Village.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: dairy products remain an effective way to add Calcium and Proteins to infant diets	Medium: to be successful, dairy farming needs to be supported in a wider agricultural support framework	Medium: the pilots created more demand for milk, but the options for producing milk are limited.	Low. Milk production from local goats is not a profitable enterprise, it is a lot of work and the income is marginal.	Limited: Households who use goat milk see improved child growth and want to continue using milk, but their numbers remain low.	Not sure. Dairy goat production will only be sustainable if more productive goat breeds are adopted.

2.4. Sourcing of food (production, collection, buying)

While there are differences between the 10 villages surveyed, most food consumed is produced in the household (44%), 34% collected from the wild and 22% is bought. There is an increasing purchasing power in better off villages where their livelihoods are corn plantation and cow raising for income generation and using the income from these to buy food.

Table 7: Main sources of food consumed in households in 10 villages in northern Lao PDR. Source: group interviews with members of Farmer Nutrition Groups (FNG), February 2023.

Village	Buying	HH production	NTFPs
Pangsa	36%	44%	20%
Nasavang	20%	50%	30%
Nam Ngeun	20%	50%	30%
Bouam Som	10%	40%	50%
Phonxay	20%	30%	50%

Average Oudomxay	21%	43%	36%
Huai Lom	14%	34%	52%
Kungpanian	42%	36%	22%
Yumchong	12%	55%	33%
Maikorkai	23%	48%	29%
Som	18%	48%	34%
Average Xieng Khouang	22%	44%	34%

- Among the interventions of the PRF-III nutrition program that aim to improve production of nutritious foods in the village, the diversification of home gardens did not work well, as the crops introduced were not easy to grow and pilot farmers dealt with water shortages.
- The SHG loans stimulating production of small livestock (chicken, ducks, pigs) is very successful in terms of producing household income for medium poor households and show excellent repayment rates. But very few of the animals produced were consumed within the producer households, so the contribution to nutrition is not so clear.
- Purchasing foods (meat, fish, eggs, oil, white rice, beans) is essential to achieve diversified child meals.
- The present economic crisis undermines households purchasing power-less amount of food for the same value of money.
- Rich households spend more on food, fish and eggs are getting more popular than meat protein.
- Medium rich villages buy less protein-rich foods over all
- Poor households gather more wild food, sell livestock, look for work as laborer. They still need to buy food and often leading to debt.
- In the district of La in Oudomxay, these problems were exacerbated by a flash flood that occurred in August 2022 and destroyed over 300 ha of paddy fields. Farming households are left without rice and income. Those who have money have started to repair the fields, and in some villages a Chinese company repairs paddy fields in return for five years of free rental use. The poor households in one of the villages visited (Ban Phonxay) are in debt, sell cattle and cannot afford to buy much food. They are dependent on the support from PRF and RRPM for buying infant food.
- These findings implicate that is important to put safety mechanisms in place to support poor households to be able to adopt improved child nutrition practices.

2.5. Food processing

- Apart from instant rice-bean porridge, there were some snacks recipes being introduced such as sweet potato/pumpkin in coconut milk by the PRF team following the MOH's recipe book.
- From surveying shops and focus group discussion, it was found that food processing practice is limited at the village level. The only food processing happening at the village's shops are fried banana, dough and pickled mustard greens.
- FNG members expressed a great interest in expanding the food processing activities they learned from participating in the PRF-III nutrition program. E.g., in Xieng Khouang, all five villages suggested a training session on producing healthy snacks. This would be aimed at children aged 2-5 years, to save money and to avoid them eating junk food (sweets, soft drink).

- Goat dairy pilots are very good initiative to promote milk consumption. The most popular recipes for consuming goat-milk were pancakes (Oudomxay) and omelets (Xieng Khouang).

2.6. Food and water storage

A: Food Storage

- The main innovation introduced by the PRF-III nutrition program are glass jars for storing pre-mixed porridge and fish powder at room temperature. The main problem is that these is no value chain making glass jars easily available at village level. They are also expensive to buy and difficult to keep clean. In all 10 villages, FNG members said they depend on the project to provide the jars and they do not have enough of them.
- Especially in Xieng Khouang, there were problems in two villages where members reported that fish powder stored in jars had gone moldy.
- Alternatives to glass jars such as resealable pouches should be considered as its cheaper.
- Vacuum packing may also be considered for freezing meat products, mushrooms. Vacuum packing machines are not expensive and easily available. Users would need training on hygienic packing practices.
- In all 10 villages, all households had access to electricity.
- In all 10 villages, the majority of households owned a refrigerator (about 60%). Most villages shop owners own a freezer as well. This opens up the prospect of working more on frozen and cold food chains for perishable products such as meat, fish, mushrooms, etc.

B: Water supply and storage

- In 9 out of the 10 villages surveyed are facing water shortage affecting sanitation, hygiene and nutritional intake capability. Women have to travel far to fetch water which takes their time and energy away. This is an urgent situation that needs to be addressed. Where possible, the use alternative sources of water could be explored. There may also be options for more efficient water use, e.g. through communal micro-irrigation systems with tanks for vegetable production.
- The fundamental water shortages found in 9 out of the 10 villages may require interventions that go beyond the scope of PRF. In that case, the World Bank could link to the convergence project on water and sanitation to improve water supply and storage linked to nutrition and health care.

2.7. Linking nutrition with other PRF components

- In all 10 villages, village authorities said that access roads, suspension bridges, repairs to water supply systems and irrigation systems are well linked to nutrition. These activities provide women with easy access to water, arable land, market and health care services.
- Issues on water supply will need to be revisited as there is no use of implementing nutrition and livelihood enhancement program without good water supply system as it hinders good hygiene and sanitation practices, limited the chance of home garden crops to germinate and grow.
- Child growth is well monitored in pink books by village facilitators from the HANSA project and health center staff, but data is not analyzed and not fed back to mothers or decision makers. Quarterly updates on malnutrition indicators should be presented in convergence meetings by the health sector team. Projects should coordinate visits to villages and respect their preferred time and availability, in particular in peak agricultural season
- Self Help Group Funds (SHG) are very well appreciated, functioning well (extremely high repayment especially in the 10 surveyed villages where 100% rate of repayment) and empower women as leaders.

Most of the users are poor households (but not the poorest) who use the credit to invest in small livestock farming.

- Almost all SHG funds are used for livestock production with the aim to sell, not for consumption. The only linking to nutrition is when 5% of profit interests were contributed to communal cooking fund. This is being applied in 2 of the 10 villages. Women take up most of the loans and the SHG committees are often led by women. The challenge is to enhance the link between small livestock production and nutrition. Although high repayment rate was recorded, it did not mean that the fund management and book-keeping were conducted properly. The SHG management team needs hands-on book-keeping and close support in order to understand how to grow the fund, knowing how to re-invest, and how to contribute to the communal cooking sessions.
- There may be scope for enhancing the success of the SHG livestock activities by training young women graduates to become Agricultural Health Service Providers (AHSP) provide basic livestock services on a commercial basis such as providing young chickens of good genetic stock which are properly vaccinated and vaccinations services for pigs and goats. There are interesting examples of such an approach being developed by ILRI in Africa¹⁸.
- The link between PRF and RRPMP is crucial for sustaining improved child feeding behaviors, especially for the poor. RRPMP provides cash transfer support only after the fourth month of pregnancy and is only disbursed quarterly.
- Some stories were heard about mothers above 30 trying to get pregnant to be able to apply for RRPMP funds.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: PRF infrastructure development provides tremendous improvement for livelihood and access to services	High: linking nutrition to good infrastructure improves people's health and wellbeing	Medium: part from the water supply that need to be revisited, the nutrition activities are well implemented	Medium: Linking nutrition activities to basic infrastructure require a certain level of investment	High: the impact of the linking the nutrition and infrastructure in one of the villages provides such a clear evidence of livelihood and nutrition improvement	Medium: The infrastructure and nutrition activities if not maintained and monitored closely, there is a chance of dysfunctionality

2.8. Vulnerability and inclusion

- Nutrition activities involved and empowered women in the villages especially the pregnant women and mothers with children under 2 years of age. The field survey also found evidence of influence towards mothers with children older than 2 years old, elders and husbands who are well sensitized on nutrition information, cooking practices and childcare.
- The ability of households to diversify child feeding depends very much on their wealth status, as they need to have cash to buy inputs.

¹⁸ <https://www.ilri.org/knowledge/publications/transforming-vaccine-delivery-system-chickens-and-goats-ghana-what>

- Poor households strongly benefit on funding from PRF and RRPMP to buy food. It is essential to continue the link between PRF and RRPMP to provide this safety-net function. Poor HHs were included in the food consumption and SHG activities.
- Poor households are most vulnerability to disasters resulting from climate-change. It is difficult for them to restore their agricultural production capacity. They often get in debt when disaster hits.
- Elders and local authorities have changed their behavior and mindset on child’s nutrition and now are very supportive. *“We are now learnt that feeding children chewed sticky rice is not a good practice, we stopped”*, A grandmother from Houailom village said.

Overall assessment of the activity:

Relevance	Coherence	Effectiveness	Efficiency	Impact	Sustainability
High: Well implemented on social inclusion	High: the target beneficiaries are aligned with the National Nutrition Strategy and Plan of Action 2025	High: The implementation allows everyone in the village to take part voluntarily	High: with small cooking session plus health and information given, the behavior change is huge	Medium: clear behavior change was observed. The poorest of poor might be a bit left out	Medium: The sustainability of the behavior change will visible only that the poorest of poor needs a closer monitoring and assistance

3. Conclusions

Looking through the nutrition intervention lens, the PRF III AF was found to be well known for its creative approaches to promote nutrition enhancement at the village level. The assessment identified multiple success factors that lead to good implementation results.

What is working well:

- The FNG concept is a very effective mechanism to achieve learning and behavior change in nutrition.
- The video clubs organized for multi-media peer learning are a cost effective and influential mechanism for intra-village peer learning and outreach.
- The formal nutrition training/information session are combined with frequent FNG meetings, home visits and communal cooking activities which lead to positive results in behavior change at individual, household and village level.
- The key concept of preparing porridge for infants and young children 6-23months, based on home-made instant powders is very popular and adopted by many mothers. The preparation saves women’s time and the porridge is liked by infants.
- The SHG loans work very well in terms of income generation and savings behavior. However, the direct link to nutrition improvement or livestock raising for consumption is not clear as most animals raised with these loans are sold. The additional income does help households to buy specific foods for infants.

The success factors of FNGs:

- High frequency of meetings (initially 4-6 times per month in the first six months, after which only 1-2 times per month), facilitated by NYGs.
- Strong support and involvement of village leaders and elders.
- Investing in and empowering women through practical communal cooking activity.

- The combined financial support from PRF and RRPMP enables poor households to adopt better nutrition practices.
- Forming video clubs with training in video making, provision of equipment and sharing over social media
- Regular child growth monitoring supported by HANSA/RRPMP helps parents keep track of child growth.

What is not working so well:

- Nutrition Home Gardens are popular, but about half of the 18 proposed crops were not adopted or germinated due to weather and soil conditions and limited access to water supply.
- Goat Dairy Pilots work well in building awareness on the benefits of milk for infants, but there are not enough goats to feed all infants who need milk. The milk produced by one lactating goat can provide just enough milk for one or two infants. An average village of 130 households may have 20 infants in the age of 6-23 months. It will be difficult to increase the goat herd size tenfold due to limitations of the terrain.
- The district convergence meetings do not lead to any improved coordination efforts as the visit schedules were not aligned and still difficult to coordinate. During these quarterly convergence meeting, the key performance indicators or key result indicators should be presented and commented by participants.
- The district health personnel visited villages to conduct children growth monitoring and mothers also often records their child's weight; however, data on child growth are not analyzed or shared with parents or policy makers.

What could be added:

- Market-based value chain solutions providing various dried instant child food ingredients (fish powder, rice/bean mix) at affordable prices could be explored. Alternative source of proteins such as pork or mushrooms could be experimented.
- Cheaper and more easily available packaging methods such as resealable bags should be tested.
- Water shortages undermine progress in nutrition, more support is needed for addressing water and sanitation issues in the target villages.
- More attention is needed to provide financial safeguard mechanisms for poor households to be able to buy child food ingredients in times of crisis.

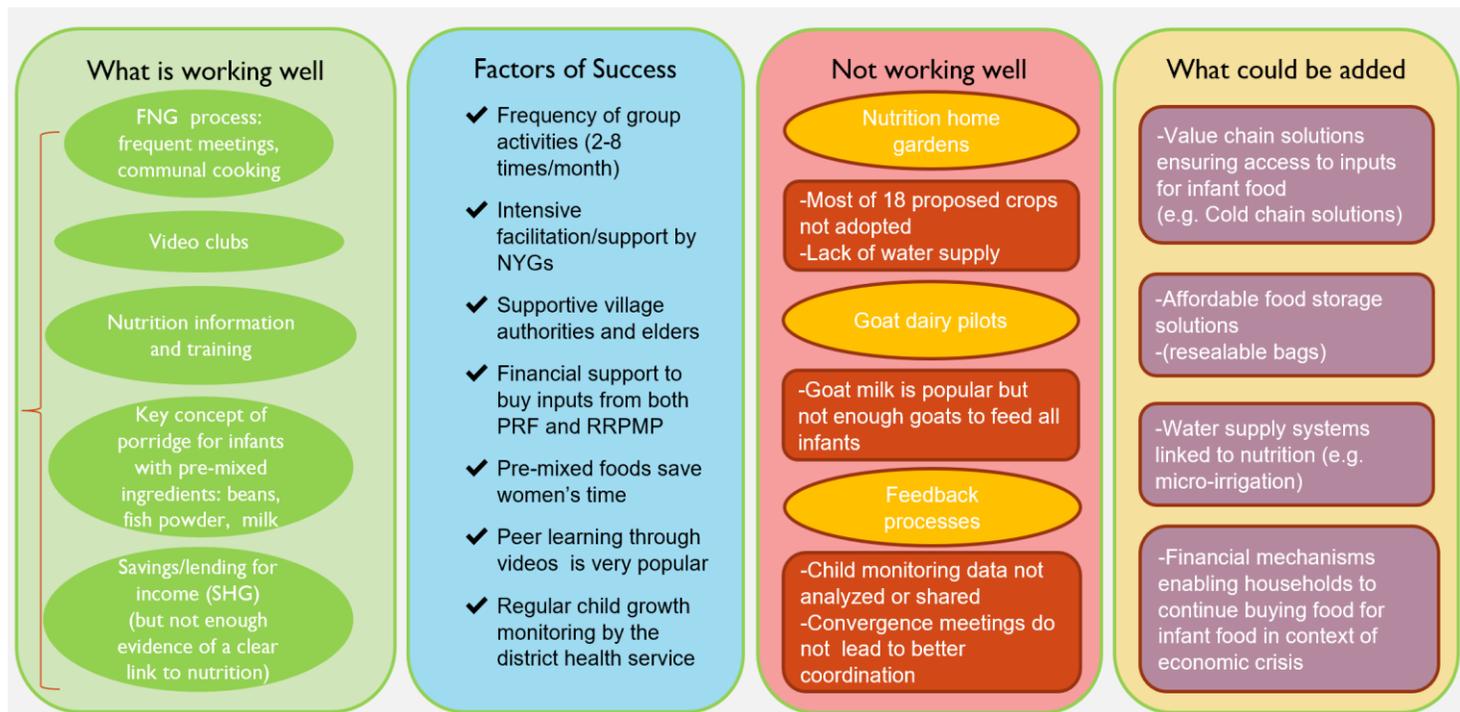


Figure 3: Summary of the Nutrition Activities Implementation

4. Recommendations

Theme 1 SBCC: The FNG approach is very successful at achieving behavior change. The activities on communal cooking, nutrition and health information session, video clubs should be kept as they are well implemented and effective. Key success elements of the FNG approach should be maintained, notably:

- Very frequent meetings of mothers and children (4-8 times a month)
- Intensive facilitation support by Nutrition Young Graduates (NYG) and qualified staff directly employed by PRF (in sufficient numbers to service FNGs adequately)
- Communal cooking of a range of healthy and affordable recipes
- Preparation of dried, pre-mix baby foods that save mother's time in cooking
- Ensuring that the data obtained from the regular child growth monitoring by the district health service (as part of nutrition convergence) are analyzed and compared with the indicators in the result framework (stunting/wasting/underweight rate).
- Starting to monitor and arrange the financial support to communal cooking session using SHG's profit interest.
- The linking between PRF and financial support from Reducing Rural Poverty and Malnutrition Project (RRPMP) to enable poor households to buy special child food.
- Video groups for peer-to-peer learning should be provided with better equipment. Video networks should be maintained and enhanced by introducing more creative to broaden the learning process.

Theme 2 Sourcing of food: The strategy relies on purchasing food inputs that are difficult to produce in the villages. Good results in child growth are directly related to the ability of a household to buy food.

- Maintain the link between RRPMP direct cash transfers and PRF support to cooking groups, to be able for households to continue buying these inputs (especially poor households)

- PRF could explore options to strengthen community forest management, especially by women, for the specific purpose of sustainable harvesting of wild food products.
- Exploring communal home garden model to see which crops are best suited for the local conditions.
- Linking village shop owners to provincial and district suppliers to promote local trade.

Theme 3 Food processing: Mothers like to cook porridge from pre-mixed dry powder stored in jars, as it saves them time and children love to eat it. There is a growing demand for these pre-mixed ingredients.

- Options for local entrepreneurs to prepare and sell premix infant food, healthy snacks, and preserved food. They would need support in linking them to suppliers and food handling technique training.
- Shift from goat dairy pilots to a wider component promoting safe use of dairy products for infants.
- Promote dairy production as an extension option that can be funded by SHG.

Theme 4 Food and Water storage: Food preservation technique should be considered for the villages that are vulnerable to weather and having exceed monocrop e.g. dried, pickled, baked alongside with alternative low-cost packaging and cold storage value chain. Water storage and well as shortages should be revisited.

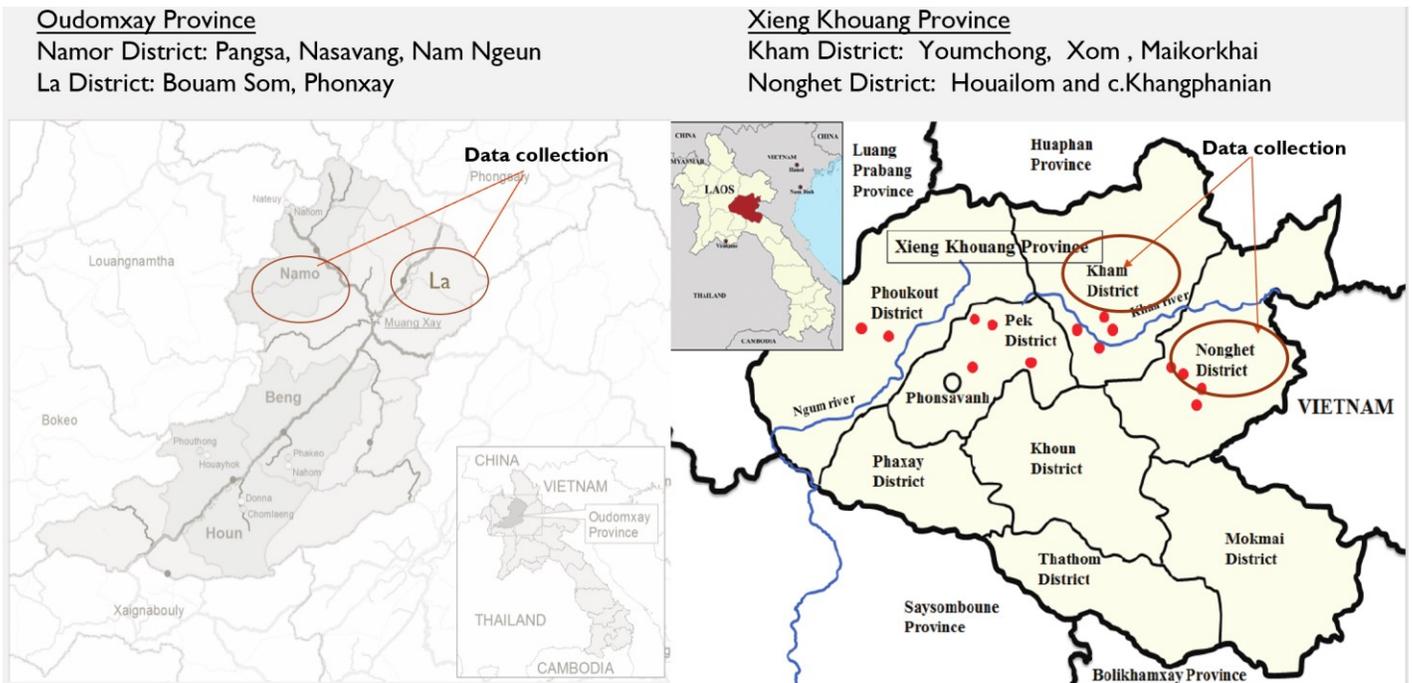
Theme 5 Linking nutrition to other PRF components:

- Revisiting the infrastructure available at the target village to ensure the linkage with the nutrition activities especially water supply for consumption, usage and farming. In addition, special attention should be given to the target villages impacted by floods/drought perhaps an insurance or funding scheme for natural disaster recovery.
- PRF should review the impact of SHG loans on nutrition, compared to direct-cash transfers and other funding mechanisms and adjust project design if needed.
- Quarterly Convergence Meetings should always start with a presentation of updated presentation of the indicators in child growth and malnutrition, segregated per village and per age category (0-6, 7-23, 24-60 months).
- There is scope for expanding the inclusion of youth, especially young graduates, as “agripreneurs” providing services and inputs (good quality chicken brood, vaccinations, animal food mixes) as a product to farmers raising animals with SHG loans. For examples, partnerships could be explored with the LURAS project in Laos and ILRI on the international level.

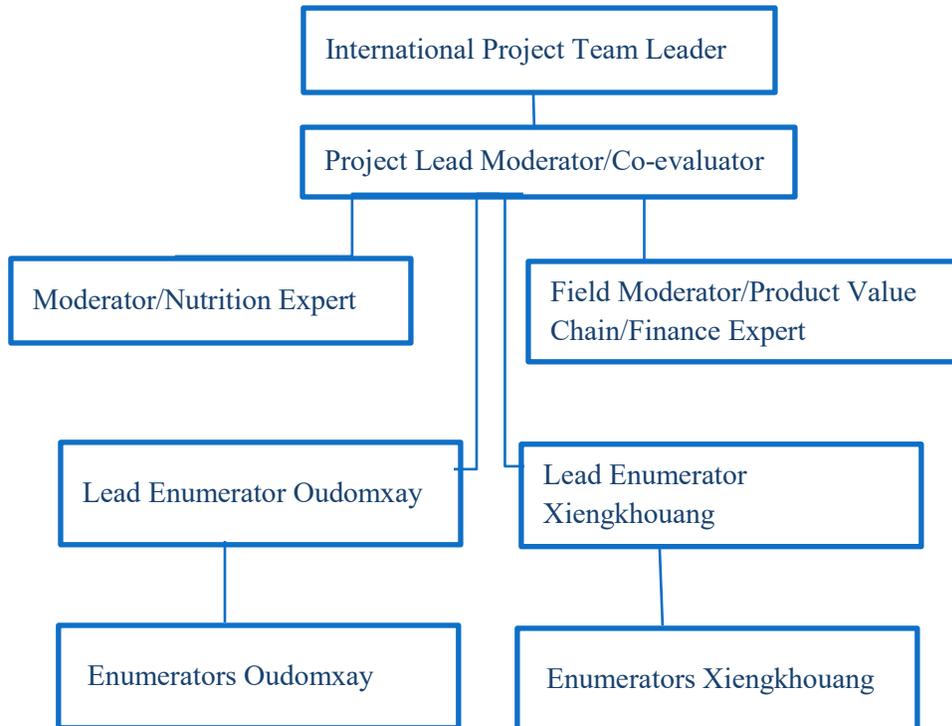
Theme 6: Social Inclusion: Empowering women through nutrition component is very effective especially when involved also village leaders and elders for behavior change communications. One of the key success factors is to have the poorest of poor being involved as much as possible and they should be given more attention and support by the NYGs and project implementation team by working closely with FNG and village leaders.

Annexes

Annex 1: Map of Survey Location



Annex 2: Survey Team Composition



Annex 3: Samples of Products

THEME 3: FOOD PROCESSING

Job's tears



Rice crackers



Khaotom



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Y

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