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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT

IN THE AMOUNT OF SDR16.6 MILLION
(US\$22.5 MILLION EQUIVALENT)

TO THE

LAO PEOPLE'S DEMOCRATIC REPUBLIC

FOR THE

Poverty Reduction Fund III Project

NOVEMBER 7, 2019

Social Development Global Practice
East Asia And Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2019)

Currency Unit = Lao Kip (LAK)

US\$1 = LAK 8823

SDR 1 = US\$ 1.3633

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AFN	Agriculture for Nutrition
CDD	Community-Driven Development
CFA	Community Force Account
CPF	Country Partnership Framework
CRPF	Compensation and Resettlement Policy Framework
DONRE	District Office of Natural Resources and Environment
DSEDP	District Socioeconomic Development Plan
ECOP	Environmental Codes of Practice
EGPF	Ethnic Group Policy Framework
EIA	Environmental Impact Assessment
ESMAP	Energy Sector Management Assistance Program
ESMF	Environmental and Social Management Framework
FIP	Family Investment Plan
FM	Financial Management
FRM	Feedback and Resolution Mechanism
FNG	Farmer Nutrition Group
GESI	Gender Equality and Social Inclusion
GoL	Government of the Lao PDR
GRS	Grievance Redress Service
HHs	Households
HNG	Home Nutrition Garden
IDA	International Development Association
IEC	Information Education Communication
IFR	Interim Financial Report
IPF	Investment Project Financing
IRR	Internal Rate of Return
M&E	Monitoring and Evaluation
MAF	Ministry of Agriculture and Forestry
MIP	Micro Investment Plan
MIS	Management Information System
MOF	Ministry of Finance
MPI	Ministry of Planning and Investment
NCB	National Competitive Bidding
NCRDPE	National Committee for Rural Development and Poverty Eradication
NNS	National Nutrition Strategy
NNSPA	National Nutrition Strategy and Plan of Action
NPV	Net Present Value
NSEDP	National Socio-Economic Development Plan
PDO	Project Development Objective
PG	Producer Group
PGG	Producer Group Grant
POM	Project Operational Manual
PONRE	Provincial Office of Natural Resources and Environment

PRF	Poverty Reduction Fund
PRFI	Poverty Reduction Fund Project I (2003 – 2011)
PRFII	Poverty Reduction Fund Project II (2011 – 2016)
PRFIII	Poverty Reduction Fund Project III (2016 – 2020)
PRFIII AF	Poverty Reduction Fund Project III Additional Financing (2019 – 2024)
RMG	Road Maintenance Group
SBCC	Social and Behavioral Change Communication
SDC	Swiss Agency for Development and Cooperation
SHG	Self Help Group
VDP	Village Development Plan
VIT	Village Implementation Team
VNC	Village Nutrition Center
VSMC	Village SHG Management Committee
WB	World Bank
WOP	Without Project
WP	With Project
YG	Young Graduates

Lao People's Democratic Republic
Poverty Reduction Fund III Additional Financing

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BASIC INFORMATION – PARENT (Poverty Reduction Fund III - P157963)

Country	Product Line	Team Leader(s)		
Lao People's Democratic Republic	IBRD/IDA	Erik Caldwell Johnson		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P157963	Investment Project Financing	SEAS1 (9358)	EACMM (8863)	Social

Implementing Agency: Poverty Reduction Fund

Is this a regionally tagged project?	
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Bank/IFC Collaboration
No

Approval Date	Closing Date	Original Environmental Assessment Category	Current EA Category
24-May-2016	30-Jun-2020	Partial Assessment (B)	Partial Assessment (B)

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach [MPA]	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-Linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	



Development Objective(s)

To improve access to basic services for the Project's targeted poor communities. The PDO would be achieved through inclusive community and local development processes with emphasis on ensuring sustainability.

Ratings (from Parent ISR)

	Implementation					Latest ISR
	06-Oct-2016	09-Jun-2017	13-Feb-2018	29-Aug-2018	12-Mar-2019	10-Oct-2019
Progress towards achievement of PDO	S	S	S	S	S	S
Overall Implementation Progress (IP)	S	S	S	S	S	S
Overall Safeguards Rating	S	S	S	S	S	S
Overall Risk	M	M	M	M	M	M

BASIC INFORMATION – ADDITIONAL FINANCING (Poverty Reduction Fund III Additional Financing - P168620)

Project ID P168620	Project Name Poverty Reduction Fund III Additional Financing	Additional Financing Type Restructuring, Scale Up	Urgent Need or Capacity Constraints No
Financing instrument Investment Project Financing	Product line IBRD/IDA	Approval Date 02-Dec-2019	
Projected Date of Full Disbursement 31-Oct-2024	Bank/IFC Collaboration No		
Is this a regionally tagged project?			



No

Financing & Implementation Modalities

- | | |
|---|---|
| <input type="checkbox"/> Series of Projects (SOP) | <input type="checkbox"/> Fragile State(s) |
| <input type="checkbox"/> Disbursement-Linked Indicators (DLIs) | <input type="checkbox"/> Small State(s) |
| <input type="checkbox"/> Financial Intermediaries (FI) | <input type="checkbox"/> Fragile within a Non-fragile Country |
| <input type="checkbox"/> Project-Based Guarantee | <input type="checkbox"/> Conflict |
| <input type="checkbox"/> Deferred Drawdown | <input type="checkbox"/> Responding to Natural or Man-made disaster |
| <input type="checkbox"/> Alternate Procurement Arrangements (APA) | |
| <input type="checkbox"/> Contingent Emergency Response Component (CERC) | |

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed	
IBRD				<div style="width: 0%; background-color: #ccc; height: 15px;"></div>	%
IDA	30.00	28.92	0.80	<div style="width: 97%; background-color: #4CAF50; height: 15px;"></div>	97 %
Grants				<div style="width: 0%; background-color: #ccc; height: 15px;"></div>	%

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Poverty Reduction Fund III Additional Financing - P168620)

FINANCING DATA (US\$, Millions)

SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	36.00	22.50	58.50
Total Financing	36.00	22.50	58.50
of which IBRD/IDA	30.00	22.50	52.50
Financing Gap	0.00	0.00	0.00



DETAILS - Additional Financing

World Bank Group Financing

International Development Association (IDA)	22.50
IDA Credit	22.50

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Lao People's Democratic Republic	22.50	0.00	0.00	22.50
National PBA	22.50	0.00	0.00	22.50
Total	22.50	0.00	0.00	22.50

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any other Policy waiver(s)?

Yes No

INSTITUTIONAL DATA

Practice Area (Lead)

Social

Contributing Practice Areas

Agriculture and Food
Health, Nutrition & Population
Social Protection & Jobs

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

**Gender Tag**

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

PROJECT TEAM**Bank Staff**

Name	Role	Specialization	Unit
Erik Caldwell Johnson	Team Leader (ADM Responsible)		SEAS1
Sybounheung Phandanouvong	Team Leader		SEAS1
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Thu Ha Le	Counsel		LEGES
Extended Team			
Name	Title	Organization	Location



I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

1. This Project Paper seeks the approval of the Board of Executive Directors to provide an additional financing of SDR16.6 million (US\$22.5 million equivalent) to the ongoing Lao PDR Poverty Reduction Fund III (PRFIII, P157963, IDA Credit No. 5827-LA). The proposed Additional Financing (AF) Credit will scale up impacts of PRFIII and will support the following: (a) an additional cycle of community development subgrants, with a focus on livelihood and nutrition-sensitive agriculture infrastructure; (b) expansion of support for the establishment and sustainability of new self-help and producer groups in Oudomxay, Phongsaly and Xiengkhuang provinces and coverage of additional districts in Houaphan province; (c) renewed engagement and investment in activities to improve nutrition outcomes for infants and young children in the four provinces targeted for the World Bank’s “nutrition convergence” approach in Lao PDR.
2. This proposed AF is in response to a request from the Ministry of Finance (MOF) of the Government of Lao PDR dated February 12, 2019.
3. The PRFIII, with a total financing of SDR 21.3 million (US\$30 million equivalent), was approved by the World Bank Board of Executive Directors on May 24, 2016 and became effective on September 13, 2016. The project’s total financing is US\$36 million, out of which US\$30 million is financed by an International Development Association (IDA) Credit and US\$6 million is financed by the Government of Lao PDR (GOL). With the additional financing of US\$22.5 million, the total financing of the project will increase to US\$58.5 million equivalent.
4. **Project Background and Status.** Poverty rates declined significantly in Lao PDR in the previous decade. However, major differences remain between regions and among socioeconomic and ethnic groups. Poverty stands at 28 percent in rural areas compared to 10 percent in urban areas. Access to services and markets remains poor in rural areas: approximately 30 percent of rural villages are at least two hours on foot from the nearest health dispensary, and only 69 percent of the bottom 40 percent have access to all-weather roads. Ethnic groups tend to be significantly poorer than the majority Lao-Tai population, even when education levels and livelihoods (farm/non-farm wages) are controlled for. Stunting remains a silent emergency, with about 33 percent of children under 5 years stunted¹, in particular children from rural upland households and from non-Lao Tai ethnic groups. Stunting rates in children in the poorest wealth quintile (48 percent) are more than three times higher than for children in the richest quintile (14 percent). The PRF is one of GoL’s main vehicles to reduce rural poverty and deliver infrastructure services in rural areas.
5. The original PDO of PRFIII is “to improve access to basic services for the Project’s targeted poor communities.” The PDO would be achieved through inclusive community and local development processes with an emphasis on ensuring sustainability. The project has 4 components, as described below.
6. **Component 1: Community Development Sub-Grants** to (1.1) carry out participatory community and local development planning processes at the village and Kum Ban levels; and (1.2) provide Sub-grants

¹ Lao Statistics Bureau. 2018. *Lao Social Indicator Survey II 2017, Survey Findings Report*. Vientiane, Lao PDR: Lao Statistics Bureau and UNICEF.



for the implementation of eligible community infrastructure Sub-projects based on the Kum Ban development plans prepared under the Project.

7. Component 2: Local and Community Development Capacity Building to finance (2.1) provision of technical assistance to build the capacity of Kum Bans and villages to assess their needs and prepare Kum Ban development plans, and to plan, implement and monitor Subprojects; (2.2) provision of technical assistance to build the capacity of provincial and district authorities to facilitate community and local development planning processes and to support and supervise the development and implementation of Subprojects; (2.3) provision of technical assistance to the National Committee for Rural Development and Poverty Eradication to promote participatory rural development in coordination with various sector ministries and other entities supporting rural development in the Recipient's territory; (2.4) provision of technical and operational assistance for the development and implementation of partnerships between PRF and other agencies in rural sanitation, nutrition, poverty assessment, and other areas within the mandate of PRF; and (2.5) monitoring and evaluation of the activities carried out under Parts 1 and 2 of the Project.

8. Component 3: Project Management to provide technical and operational assistance for the day-to-day management of the Project and the carrying out of financial audits. It also includes remuneration of national, provincial and district PRF staff; associated equipment and operating costs; accounting, procurement, financial management, internal controls, auditing, and other specialized areas.

9. Component 4 – Nutrition Enhancing Livelihood Development to (4.1) provide capacity building assistance to village Self-help Groups (SHGs), with a focus on women's self-help groups in selected communities, to develop and implement nutrition sensitive livelihood activities and to enhance their knowledge of livelihood activities including financial literacy and production cycles; (4.2) monitor and evaluate the activities carried out under Component 4 of the Project, including carrying out of studies on thematic or operational innovations and participatory assessments of nutrition training.

10. **Progress towards achieving the PDO is Satisfactory.** The project is on track to achieve its development objective before the closing date of June 30, 2020. The main project indicators, including total beneficiaries, measures of community participation, and technical quality have already exceeded the set targets. For example, the figure of 866,700 target beneficiaries is already 20 percent beyond the target of 690,000, 87 percent of villagers have voted on village priorities compared to the target of 75 percent, and more than 9,962 households are taking SHG loans for livelihood investment compared to a target of 8,000.

11. **Implementation performance is Satisfactory.** Two cycles of community sub-projects are nearly complete and the community procurement process for the last cycle of community sub-projects is in progress (Cycle 16). A technical audit has confirmed the consistently high quality of sub-project construction. A Performance Assessment of the 915 village Self-Help Groups (SHGs) supported under PRFIII found that 70 percent of SHGs have reached at least a "very good" performance rating (between 80-100 out of 100 points) and are, therefore, likely to be self-sustaining. The main challenge faced in implementing the original project is a shortfall in timely availability of government counterpart funds. As of March 2019, US\$2.6 million of the US\$6 million committed has been made available. Notwithstanding this counterpart financing shortage, all project targets are on track to be achieved as the number of villages covered by the project turned out to be higher than anticipated at the time of project appraisal,



so a higher number of sub-projects and total beneficiaries have been reached. The Bank continues to follow-up with the relevant authorities to facilitate financing of a list of sub-projects that have been identified and designed by communities with the expectation of Government co-financing, which they have yet to receive.

12. All legal covenants are in compliance. There is no overdue audit report.

13. Financial management performance is rated Satisfactory. Financial management arrangements are in place as agreed and the system is working properly. Financial management reporting and audit requirements have been complied with. The FY18 audit report was submitted on time, unqualified and satisfactory to the Bank.

14. As of October 2019, IDA disbursement was at 97 percent with US\$0.8 million remaining to be disbursed. Parallel co-financing from the SDC (Swiss Agency for Development Cooperation) in the amount of US\$18 million was approved after the PRFIII IDA financing was approved, so it was not reflected in the Project Appraisal Document (PAD). As of July 2019, 66 percent of SDC financing had been disbursed.

15. Overall performance on social and environmental safeguards is Satisfactory, with no major negative impacts or complaints identified. Land-related issues appear to be adequately managed and documented. The environmental risk is considered low given the nature and locations of subproject activities. Safeguard policy requirements and impact mitigation measures are provided in the Environmental and Social Management Framework (ESMF) to ensure policy compliance.

16. **Rationale for Additional Financing.** The proposed additional financing will allow the Poverty Reduction Fund (PRF) to enhance the impact of its livelihood and nutrition activities as a contribution to the Government's multi-sector, multi-project nutrition convergence approach to reducing child stunting in 12 priority districts.² PRF's past investments in SHGs and Village Nutrition Centers (VNCs) have been found to be successful in increasing the availability of nutritious food in poor communities and bringing about behavioral change for better nutrition practices through group-based learning. Financing for these types of activities under PRFIII has been limited, and currently covers only two of the 12 priority districts for the nutrition convergence. The AF will therefore scale up activities to all 12 priority districts. In addition, revisions to (i) Project Development Objectives; (ii) Results Framework; (iii) Components and Costs; (iv) loan closing date; and (v) risk ratings are proposed as part of the AF to reflect the expanded scope of the Project.

17. **Alignment with Country Partnership Framework (CPF) and the Twin Goals.** The AF remains consistent with the Lao PDR CPF, 2017–2021 (Report No. 110813-LA), continuing to support the objectives of “investing in infrastructure for growth and inclusion” and “reducing the prevalence of malnutrition”, in particular. Investments in rural infrastructure will continue to connect farmers to markets, and improve production, processing and storage capacity through irrigation, agriculture and livestock-related water supply, animal and crop fencing and storage, and other small-scale infrastructure. Support to the

² The overall goal for the World Bank-financed multisectoral nutrition convergence approach is to showcase that with an integrated approach, in four years, stunting rates could be reduced significantly, by as much as 1.75 percent annually. The proposed four sectoral operations will all contribute to tackling the immediate and underlying causes of malnutrition in provinces with the highest share and absolute numbers of stunted children. The selected evidence-based interventions proposed under the convergence approach are expected to reduce stunting rates in the target areas by over 20 percent by 2024, which will correspond to close to 2 percent reduction nationally.



production and marketing capacity of poor households will also help these households access new markets and gradually work their way up the value chain, complementing the Bank's investment in agriculture commercialization, which aims to leverage agribusiness firms to help farmers tap into larger markets in neighboring countries.

18. The AF will also continue to support the World Bank Group's strategic Twin Goals of ending extreme poverty and boosting shared prosperity. This is consistent with the focus of the government's 8th National Socio-Economic Development Plan on improving living standards through poverty reduction, and the implementation of the *Sam Sang* (3-builds) policy on decentralized public administration and development of targeted poor villages. The increased focus on nutrition within the AF design will also enable the project to contribute to the *National Nutrition Strategy to 2025 and Plan of Action 2016-2020*, particularly with respect to improving nutrient intake, achieving adequate food consumption emphasizing the first 1,000 days of life (1,000-day window), and improving the availability of and access to nutritious foods to reduce child stunting. This will be done through the Bank's overall Nutrition Convergence approach.

19. The AF will specifically support the implementation of agriculture-related activities of GoI's National Nutrition Strategy and the recommendations from the mid-term review of the Plan of Action conducted in 2018. It will include an additional focus on small-scale agriculture infrastructure and access to finance. The AF will also be aligned with the Ministry of Agriculture and Forestry's (MAF) *Agriculture and Development Strategy 2025*, supporting the target of increased per capita livestock and meat production.

20. The AF design comes at a time when, globally, the case for redesigning agriculture to support better nutrition and health is well recognized and was featured in the process that established the United Nations 2030 Agenda for Sustainable Development. The additional investment in nutrition under PRF III builds on lessons from the LANCET series 2013³. It focuses on improving complementary feeding⁴, particularly in light of the recently established association between child stunting and the consumption⁵ of multiple animal source foods (e.g. meat/fish, eggs and dairy), and additional evidence on the risks of using biofuels (e.g. charcoal, wood and animal dung) on child stunting due to the high levels of indoor household air pollution⁶.

21. **Gender Equality.** The parent project has been guided by a Gender and Social Inclusion (GESI) Action Plan aimed at promoting gender equality. The GESI Action Plan includes requirements regarding the voice of women in the selection of community infrastructure subprojects, promotion of access to finance through the formation of SHGs with majority female membership, and efforts to recruit women for consultancies financed by the project which tend to be filled by males. The Action Plan target is 30 percent of consultants being female and the current situation is that 28.95 percent are female. Specific

³ Bhutta, Z. A., J. K. Das, A. Rizvi, M. F. Gaffey, N. Walker, S. Horton, P. Webb, A. Lartey, and R. E. Black (2013). Evidence-Based Interventions for Improvement of Maternal and Child Nutrition: What Can Be Done and at What Cost. *The Lancet* 382 (9890): 452–77.

⁴ Lassi, Z. S., G. S. Zahid, J. K. Das, and Z. A. Bhutta (2013). Impact of Education and Complementary Feeding on Growth and Morbidity of Children Less than 2 Years of Age in Developing Countries: A Systematic Review. *BMC Public Health* 13 (3): S13.

⁵ Headey, D., Hirvonen, K., and Hoddinott, J. (2018). Animal Sourced Foods and Child Stunting. *Amer. J. Agr. Econ.* 100(5): 1302–1319.

⁶ Danaei G., Andrews K.G., Sudfeld C.R., Fink G., McCoy D.C., Peet E., et al. (2016). Risk Factors for Childhood Stunting in 137 Developing Countries: A Comparative Risk Assessment Analysis at Global, Regional, and Country Levels. *PLoS Med* 13(11):e1002164. doi:10.1371/journal.pmed.1002164



gender equality gaps to be targeted by the AF activities include women's limited voice in village decision making compared to men, women's limited earnings in rural areas compared to men, and the health risks faced by women during pregnancy and child birth which are not risks to male health.

22. At 89 percent, men comprise the vast majority of village chiefs. As the village chief is the chair of the Village Development Committee (VDC), they have the most influence in the community over development decisions. The parent project has already achieved its target of 90 percent of subprojects being prioritized by women's groups. To build on this already significant accomplishment, the AF will add indicators for both Village Self-help Group Management Committees (VSMCs) and Village Implementation Teams (VITs) to include at least 65 percent and 40 percent female members, respectively. The baseline indicators are 21 percent women in VSMC leadership and 31 percent women in VIT leadership. There is also a gender gap in terms of economic empowerment, with over 60 percent of women in Lao PDR working as unpaid family workers compared to only 26 percent of men. The situation is much worse in the rural areas where nearly 70 percent or more of women work as unpaid family workers. To address this gap, Road Maintenance Groups (RMG) financed under the parent project and AF hire only women. The baseline survey for an RMG impact evaluation found that only 8 percent of women in RMG-targeted villages that are from "poor" and "poorest" households are earning income. The project aims to increase this percentage to 16 percent through RMG employment, taking care not to put undue stress on pregnant women or recent mothers, in particular. To ensure the sustainability of this income source for women, the Ministry of Public Works has been, and will continue to be, engaged in training and supporting RMGs and they will be encouraged to apply the model beyond project support. The Bank is also supporting an impact evaluation of RMGs to provide evidence and lessons to inform government policy and potential scaling up. As women constitute more than 80 percent of SHG members, they also stand to earn approximately 80 percent more from the sale of SHG-financed products than men. This income further addresses the earnings gap in target rural villages. To avoid the risk of reducing the time women have to care for their children, or the risk of an overload of physical work, the process of SHG members taking loans and the promotion of home nutrition gardens will be guided by a simple gendered time use analysis and the introduction of time saving technologies when cooking.

23. The maternal mortality rate in Lao PDR is one of the highest in the world, with 197 deaths per 100,000 live births in 2015. While the project will not measure the impacts on maternal mortality, farmer nutrition groups (FNGs) financed by the AF project will focus specifically on healthy pregnancies and child birth, emphasizing the importance of a diverse, nutritious diet, reduced workload, and rest during pregnancy. This will be done through social and behavioral change communication (SBCC), introducing time saving technologies, peer support among FNG members, and the education of other family members.

24. **Climate Change and Natural Disasters.** Lao PDR is vulnerable to natural disasters and climate change. About two thirds of the population experience an average of 1.5 serious floods or droughts every year. From 1970 to 2010, 33 natural hazard events (mostly floods and droughts) occurred, affecting more than 9 million people and resulting in economic losses of over US\$ 400 million. These included Typhoon Ketsana, Typhoon Haima and Tropical Storm Nok-Ten. Climate change is projected to exacerbate these natural disaster trends, with increasing severity and frequency of floods and droughts. The small-scale infrastructure that PRF constructs, such as earth roads, small bridges, culverts, and crop irrigation, as well as small-scale agricultural production supported by PRF, for example food gardens, are especially vulnerable to extreme weather events such as flooding.



II. DESCRIPTION OF ADDITIONAL FINANCING

25. **Revised PDO.** The PDO of the parent project remains relevant. However, to capture the increased emphasis on livelihood and nutritional outcomes, the PDO would be revised from “to improve access to basic services for the Project’s targeted poor communities,” to, “to improve access to community-prioritized basic services as well as to support the production and consumption of nutritious foods in the Project’s targeted poor communities.”

26. The project will achieve the new livelihood and nutrition elements of the revised objective by (i) providing seed capital, technical assistance and group capacity building for small-scale livelihood investments which will increase livestock, crop and non-farm production for household consumption and sale; and (ii) forming and strengthening groups of pregnant women and mothers with children under 2 years to grow diverse and nutritious foods in their gardens, year-round, and to process and cook food for their own, and their children’s, consumption. The AF activities will also focus on mitigating the risks of climate change both to physical infrastructure and livelihood activities, including through building the capacity of rural communities and local officials to plan for and respond to climate change.

27. **Results Indicators.** While most of the intermediate indicators will remain the same, significant changes to the PDO indicators would be made as part of the AF restructuring. The changes from the baseline indicators for access to various infrastructure and services cannot be accurately measured due to a difference in coverage areas between PRFII (which the PRFIII baseline is based on), PRFIII and the proposed AF. Therefore, a new methodology for determining benefits in terms of reductions in time to access infrastructure financed by the PRF will be applied. New indicators will also be added to better reflect the livelihood and nutrition aspects of the AF and to align with the broader “nutrition convergence” approach. Key new and revised PDO indicators include:

- Percentage of children 6–23 months from FNG households consuming foods from four or more recommended food groups (new)
- Kilograms of animal meat produced (new)
- Percentage of reduction in time to access a health facility (revised)
- Percentage of reduction in time to access safe water sources (revised)
- Percentage of reduction in time to access improved school (revised)
- Percentage of reduction in time to travel from village center to Kum Ban center due to road improvements (revised).

28. **Results Chain.** The project results chain depicts the theory of change of the AF project as shown below. The outcomes of the project contribute to the overall World Bank nutrition convergence approach to reduce child stunting. While other World Bank-financed projects will finance important contributions to reductions in child stunting such as improved maternal and child healthcare services, clean water, improved hygiene and sanitation practices and cash subsidies for the purchase of nutritious food, PRFIII AF will complement these investments by further increasing cash for food purchase through income generating activities as well as the production, processing and feeding of children with home grown, nutritious food. The overall results chain of the proposed multi-sectoral nutrition convergence approach



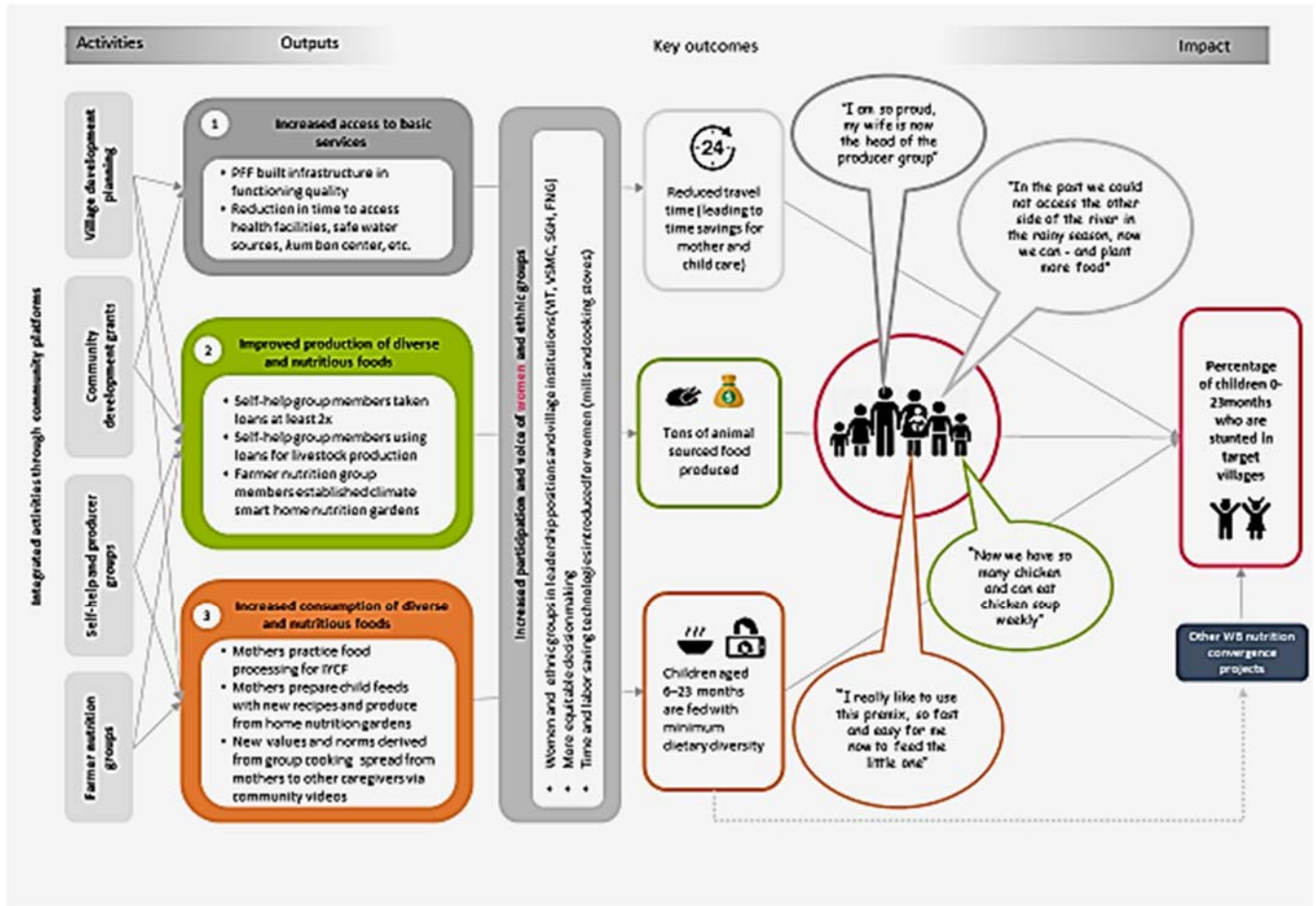
is presented in Annex 2 and the overall monitoring and evaluation approach for the World Bank portfolio on nutrition is in Annex 4.

Component	Activities	Outputs	Project Outcomes	Impacts
Component 1: Community Development Sub-Grants	<ul style="list-style-type: none"> Subgrants for community infrastructure Village and District planning meetings Community training on sub-project management, infrastructure operations and maintenance Road Maintenance Groups established and trained 	<ul style="list-style-type: none"> Community infrastructure constructed and operational Village and District plans are prepared and used to prioritize investments Community members manage project funds and complete procurement effectively Women and ethnic minorities participate actively in village prioritization 	<ul style="list-style-type: none"> Reduced time from village to dispensaries, schools, safe water resources and road travel from village to Kum Ban center Improved quality of public facilities such as schools and dispensaries Technical quality of construction is high RMG members have earnings when they previously had not 	<ul style="list-style-type: none"> Reduce the percentage of children under five years (with a focus on those under two) who are stunted in participating provinces
Component 2: Local & Community Development Capacity Building	<ul style="list-style-type: none"> Staff training Government staff support communities in subproject implementation Safeguard training M&E training 	<ul style="list-style-type: none"> Training events Field mission support 	<ul style="list-style-type: none"> More competent staff More sustainable systems of government support to communities Communities more able to manage infrastructure and assets themselves and increase the quality of service delivery VITs, VSMCs and SHGs have gender balance in leadership 	
Component 3: Project Management	<ul style="list-style-type: none"> Hiring and management of staff Financial audits Production of financial reports and procurement Management of MIS and M&E systems and reporting Manage grievance redress system 	<ul style="list-style-type: none"> Financial reports and audits MIS M&E reports Procurement of goods, works and consultants Grievances addressed 	<ul style="list-style-type: none"> Well-managed financial resources High technical quality of project implementation Beneficiaries are highly satisfied with the quality of PRF support 	
Component 4: Nutrition Enhancing Livelihood Development	<ul style="list-style-type: none"> Establishment of SHGs, PGs and FNGs Production of SBCC materials with focus on agriculture-nutrition links and gender equality, 	<ul style="list-style-type: none"> SHGs, PGs operating FNGs meet and cook with own produce SBCC materials produced and used by FNGs/SHGs for peer learning 	<ul style="list-style-type: none"> Increase in the volume of animal meat produced Increase in the volume of animal meat consumed Increased percentage of children 6–23 	



Component	Activities	Outputs	Project Outcomes	Impacts
	including community video production <ul style="list-style-type: none"> • FNG meetings, group food processing with time saving mill technology, cooking and home visits • Piloting of super clean cookstoves and local pellet production • SHG loans to members for livelihood investments • Training of SHG members in agriculture and livestock techniques • Establishment of home nutrition gardens of FNG members and garden visits 	<ul style="list-style-type: none"> • Cookstove pellets produced and purchased • Support time for mother and child care • SHG loans provided • SHG meetings take place on a regular schedule • Increased knowledge of SHG members in agriculture and livestock raising techniques 	months from Farmer Nutrition Group member households consuming foods from four or more recommended food groups <ul style="list-style-type: none"> • SHGs, PGs and FNGs are self-sustaining 	

29. Below is a more graphic representation of the impacts the project intends to have in the lives of its beneficiaries.



30. **Reduced PRF III coverage area.** The AF coverage area will be significantly smaller than the original project, shrinking from 43 districts in 10 provinces to 12 districts in four provinces. The four provinces are Houaphan, Oudomxay, Phongsaly and Xiengkhuang. PRF III is already covering 10 of the 12 districts to be targeted in the AF. The two districts of Kham in Xiengkhuang and Bountai in Phongsaly province will be added. As there are 881 villages in the 12 target districts, and the similarly designed Agriculture for Nutrition (AFN) program intends to cover 400 villages, PRF III AF will cover the remaining 481 villages.⁷ The list of target villages is included as an annex to the revised Project Operations Manual (POM). While the AF will only finance new investments in the 12 target districts, PRF will provide support, as needed, to ensure that the remaining activities financed under PRF III in the other six provinces are completed successfully.

31. **AF implementation period.** The implementation period will be from December 2019 to June 2024, allowing a full four years of implementation and a final six months for project evaluation and

⁷ Similar to PRF III AF, and also managed by the Ministry of Agriculture and Forestry, the Agriculture for Nutrition Program (AFN) aims to reduce extreme poverty and malnutrition in the poorest communities in Northern Laos by strengthening public services, establishing community driven agriculture-based nutrition interventions, and forming sustainable and inclusive market-driven partnerships. Activities include the establishment of nutrition-sensitive agriculture production infrastructure, particularly micro-irrigation systems, the creation of farmer nutrition schools, and the financing of investments supporting availability and utilization of nutritious food for women-led households.



financial closure. This timing overlaps with the implementation period of the original project which has a project closing date of June 30, 2020 and which will be extended to June 30, 2024 to align with the closing date of the AF. This timing extends beyond the current closing date of the AFN program (closing in 2022), but it aligns well with the four other “nutrition convergence” projects, namely: Health Governance and Nutrition Development Project (HGNDP; P151425); Health and Nutrition Services Access Project [HANSA; P166165; Under Preparation); Scaling-up Water Supply, Sanitation and Hygiene Project (P164901); and Reducing Rural Poverty and Malnutrition Project (P162565). To utilize the full four-year implementation period, efforts to establish readiness conditions such as recruiting and training new personnel, piloting new activities, and conducting awareness raising activities in the 12 target districts will be financed during 2019, under the original project.

32. **Overview and financing of new and revised activities.** All four existing project components will remain, but the emphasis will shift from community infrastructure investments to livelihood and nutrition-oriented investments. See **Table 1**, below, for a summary of the distribution of finances for the original project and for the AF project. It should be noted that parallel financing from the Swiss Agency for Development Cooperation (SDC) in the amount of US\$18 million was not included in the PAD for the original project as it was confirmed after IDA financing approval. With the US\$58.5 million planned from IDA and Government Counterpart Financing combined with the US\$18 million in parallel financing from SDC, total PRFIII financing amounts to US\$76.5 million.

Table 1. Revised Project Cost and Financing by Component and Sources with AF (US\$58.50 million)

Project Component	IDA	GOL	IDA AF	Total Project Cost
1. Community Development Sub-grants	20.40	6.00	6.26	32.66
2. Local and Community Development Capacity Building	3.30	0.00	1.21	4.51
3. Project Management	5.40	0.00	2.90	8.30
4. Nutrition Enhancing Livelihood Development	0.90	0.00	12.13	13.03
Total	30.00	6.00	22.50	58.50

33. **Detailed Description.** The AF follows the structure of the original project and comprises four components: Component 1: Community Development Sub-grants; Component 2: Local and Community Development Capacity Building; and Component 3: Project Management; and Component 4: Nutrition Enhancing Livelihood Development. The following paragraphs briefly describe the revised and new activities to be financed by the AF under each component.

34. **Component 1: Community Development Sub-grants (US\$32.66 million, of which IDA AF, US\$6.26 million).** Out of the total financing for this component, approximately US\$5.22 million will be distributed proportionally across the 12 target districts for infrastructure investments according to the percentage of target villages in the district which are not already covered by AFN. Approximately 75 percent of the 481 villages (approx. 361 villages) will have an average of US\$14,500 for infrastructure



investments, and district governments will facilitate review and allocation of actual funds according to proposals made by each village, so specific subproject values may be higher or lower than the average. There will be a subproject ceiling value of US\$25,000. There will be only one cycle of subprojects financing, Cycle 17, according to the annual cycles implemented by PRF over its history, but the subprojects may be implemented over the course of the first 2-3 years to reduce the burden on project staff. Funds will also be allocated for village, district planning, subproject prioritization as well as training of subproject VITs.

35. *Subproject implementation approach.* As the average subproject financing will be considerably lower than under the original PRFIII project, the focus will be on smaller subprojects that can be implemented by the community (also known as “Community Force Account” or “CFA”) rather than large sub-projects implemented by private sector contractors. This approach will maximize the funds available for construction materials and build community skills for ongoing operations and maintenance. All road rehabilitation projects will also be accompanied by an RMG maintenance period as this will extend the life of these investments and provide income to the poorest households in the village, many of whom are headed by vulnerable, single mothers. In contrast to the pilot RMG activities under the original project, RMG teams may include men and/or women, as decided by each village. While financing is limited, efforts to mitigate the risk of heavy rains and flood damage will be integrated into subproject design to the extent possible. A new Disaster Risk Management (DRM) Manual will be applied to subproject design and community training to enhance the resilience of infrastructure to extreme weather and climate impacts. The methodology focuses on which hazards or prevailing conditions may lead to the failure/ collapse/ dysfunction of the respective structure to plan accordingly.

36. *Subproject eligibility.* The focus of infrastructure investments will be on productive activities that improve household production, income generation and nutritional outcomes. Eligible sub-project types will include village road rehabilitation, small bridges, irrigation systems, roofed market houses and agriculture and livestock materials and equipment such as fencing and storage and processing facilities. Water supply subprojects will be eligible but limited to those which primarily focus on agriculture and livestock activities (i.e. water storage for vegetable watering or animal drinking water) rather than household drinking water as there is a separate World Bank-financed *Water and Sanitation Project* as part of the Nutrition Convergence group of projects which could finance such community needs. Education and health sector subprojects will be ineligible as education infrastructure does not contribute directly to livelihood and nutrition outcomes and health subprojects are excluded as there is a separate health project under the Nutrition Convergence approach, the *Health and Nutrition Services Access Project (P166165)*.

37. **Component 2: Local and Community Development Capacity Building (US\$4.51 million, of which AF, US\$1.21 million).** The main activities financed under this Component will be capacity building by project consultants and government staff as well as direct support to implementation in the field. There will also be modest resources available for occasionally engaging technical specialists to strengthen implementation activities such as microfinance or nutrition specialists. Rather than separating monitoring and evaluation for Components 1 and 2 from Component 4 as under the original project, this Component will now finance M&E of all project Components, including any specialized studies.

38. **Component 3: Project Management (US\$8.3 million, of which IDA AF, US\$2.90 million).** In keeping with the overall reduction in geographic scope and community infrastructure investments, the



number of PRF staff will be significantly reduced. Consultants will be retained only in the 10 districts within the 4 target provinces where activities are ongoing and two new district offices will be established with the district administration in Kham in Xiengkhuang and Bountai in Phongsaly Province. There will be a more limited number of consultants based in the Xone District in Houaphan due to the small number of villages. Management Information Systems (MIS) and Monitoring and Evaluation (M&E) activities will be enhanced through the introduction of an online system that allows for the entry of data in the field and real-time data analysis and report generation. Some reports will also be shared publicly to enhance the transparency and accountability of project activities.

39. **Component 4: Nutrition Enhancing Livelihood Development (US\$13.03 million, of which IDA AF, US\$12.13 million).** This component will be significantly scaled up, with additional subcomponents and activities. Subcomponent (4.1) will be expanded from capacity building of existing SHGs to establishing new SHGs through seed grants and ongoing technical support. There will also be the addition of PGs to enhance SHG members' access to formal markets through village-level commodity aggregation and value addition. Young graduates who have been trained at agricultural or other relevant institutes in the country will be hired to support project activities in a catchment of four villages each, on average. As in the case of Component 1, Component 4 will include support for farmer practices that plan for and respond to the risks of climate change, particularly the risks posed by intensified rainfall and drought on agricultural production and food security.

40. *Self Help Groups (SHGs).* A target of 2,405 SHGs will be established in the 481 new target villages, by mobilizing approximately 24,050 poor households. Systematic and modular training for SHGs will be delivered to develop them into self-managed and self-sustainable community institutions. After meeting the requirements established in a SHG performance assessment, each SHG member will prepare a family investment plan. These will be combined with the plans of other SHG members into a micro investment plan for the SHG. The micro investment plan will be submitted to the VSMC, and then PRF district staff for approval and release of the SHG seed grant. This will be provided based on a sum of US\$ 120 per SHG member. The VSMC will comprise members of SHGs and the village council, whose responsibilities will include establishing a bank account for receiving and distributing seed grants to SHGs and providing overall support for the effective functioning of SHGs in the village.

41. Financial literacy will be advanced among SHG members as well as access to secure and affordable financial services, including potential access to commercial banking institutions. Training and extension services will be provided to SHG households in areas such as productivity enhancement, animal mortality reduction, climate-smart agriculture, business development services in handicraft and enterprise development. SHG members will also receive training and information on small investments that could improve their lives such as improved latrines and equipment for the clean cooking such as biogas and electric stoves. A detailed description of the steps to form and operate SHGs are included in the SHG Guidelines adopted by PRF.

42. *Producer Groups (PGs).* The AF will support the establishment of 100 new PGs by mobilizing SHG members engaged in similar livelihood activities such as chicken raising, corn, cardamom and other products. PGs will be business groups owned and managed by producers, all or most of which will be SHG members, for their mutual benefit. PGs will prepare Business Plans for the review and approval of the VSMC and district PRF staff to access Producer Group Grants (PGGs). PGGs will finance activities including



production inputs and post harvesting equipment (drying, grading, weighing and transporting products to the nearest market). A detailed description of the steps to form and operate PGs are included in the Producer Group Guidelines adopted by PRF.

43. *Nutrition.* Beyond the monitoring and evaluation activities envisaged in the original PAD, subcomponent (4.2) will finance the establishment and activities of Farmer Nutrition Groups (FNGs) comprised of women and children in the “1,000-day window,” the establishment and maintenance of Home Nutrition Gardens (HNGs), and multi-media peer learning activities so that members of the FNGs can create and share videos that communicate lessons and socio-behavioral change communication (SBCC) messages, especially those related to food processing, maternal nutrition, child feeding, food production and expenditures. SBCC activities under this AF are part of the overall nutrition convergence strategy which relies on the reinforcement of common messages across the projects, using common delivery platforms, supplemented by project-specific messages delivered through project-specific channels (Annex 3).

44. *Farmer Nutrition Groups (FNGs).* Comprising mothers and children in the 1,000-day window, one FNG will be established in each of the 481 target villages to provide sustainable, community managed nutrition platforms for practical peer learning, home visits and collective group support for food processing, cooking and child feeding with own agriculture and livestock produce. To increase dietary diversity and the quality of maternal diets and diets of children 6-23 months old, and to save time for women which can be used for household production, income generation, and/or child care, innovative technologies will be introduced such as: i) nutritious instant porridge powders from milled and roasted rice and beans, ii) fish powder from small indigenous fish species, iii) super clean cooking stoves (in partnership with the World Bank’s Energy Team), and iv) child feeding with buffalo milk. AF financing for the hardware aspects of piloting the use of cookstoves in 50 selected villages (i.e. cookstoves, biomass pellet machines and driers) will be complemented by World Bank-managed, Energy Sector Management Assistance Program (ESMAP) parallel financing for the “software” aspects of the pilot such as the assessment of available biomass materials, willingness to pay by potential users, viable models for pellet production, etc. Use of buffalo milk in child feeding will be piloted through a partnership with the Laos Buffalo Dairy company based near Luang Prabang.

45. *Home Nutrition Gardens.* FNG members will be provided with support to increase year-round availability of diverse nutrient dense, climate resilient plant foods for home consumption and FNG cooking. Support will be provided on individual farm planning and technical assistance, access to affordable, improved seeds or seedlings for nutritious vegetables and fruits, as well as shade houses to protect plants from sun and rain damage.

46. *Multimedia Peer Nutrition Learning.* FNG members will be trained in a village-led video production process to capture and disseminate success stories starring local villagers and using culturally appropriate ways of storytelling and local languages. A video platform (WhatsApp, Facebook, VIMEO or downloadable from a cloud or a SD card) will be developed allowing for an inclusive child care approach (strengthening spousal communication and outreach to other caregivers and other women in the reproductive age). This approach to behavioral change communications will complement training provided by the Ministry of Health on mother and child nutrition practices under another Nutrition Convergence project.



47. **Institutional arrangements.** Since approval of the original project, the National Committee for Rural Development and Poverty Eradication (NCRDPE) has been disbanded and PRF has become a level-two technical organization within the Ministry of Agriculture and Forestry (MAF), as per Prime Minister's Decree No.99/PM, March 2017 on the *Organization and Functionalities of the Ministry of Agriculture and Forestry*. PRF has retained its overall governance structure, with the Minister of Agriculture and Forestry replacing the Minister of the Government Office as chair of the board. PRF activities are also coordinated within MAF through the newly created Department for Agriculture Cooperatives and Rural Development.

III. KEY RISKS

48. **The overall risk rating has increased from Moderate to Substantial.** While the AF will build on fifteen years of implementation experience and the application of lessons learned from implementing the original project, the emphasis is shifting heavily into livelihood and nutrition activities where PRF has less experience. Working as part of the Nutrition Convergence program in the 12 target districts will entail significant coordination challenges as well.

49. **Macroeconomic.** While the AF project does not include additional counterpart financing, counterpart financing under the original projects has yet to be fully approved and this shortfall will continue to be a lingering issue during the AF period. The shortfall in counterpart financing is due to fiscal pressures. To address this issue, MAF and MPI have submitted a request for the remaining amount of counterpart financing for the 2020 national budget. This request will be considered by the National Assembly in October-November 2019. The Bank will follow-up to confirm that all counterpart financing has been approved for the 2020 budget, and if not, that the remainder is requested in the 2021 budget.

50. **Technical design of the project.** As the PRF has been in operation for 15 years, the design has been refined over time to integrate lessons learned. The AF activities include modifications to the ongoing community sub-grant and SHG support approaches, as well as more significant adjustments to the earlier village nutrition centers, which will now be FNGs. However, the PRF team has extensive experience adapting approaches and will be piloting some of the design changes in advance of the start of AF activities as a way to mitigate the risks of introducing new design features.

51. **Institutional capacity.** PRF's move into the Ministry of Agriculture and Forestry has not compromised its effectiveness. As the main implementing agency, PRF continues to be a strong performer, implementing activities effectively in 43 districts in 10 provinces and with a strong track record of disbursement as well as effectiveness, efficiency and transparency as found in the *2018 Technical, Utilization, and Beneficiary Satisfaction Assessment* and other similar PRF assessments. The AF will entail a shift in responsibility from the provincial to the district level, but district officials have performed well under the original project with back up support from YGs and would be expected to continue to do so.

52. **Fiduciary.** While PRF has well developed systems for disbursing funds to communities and procuring at the community level, this remains a significant risk as there are such numerous small transactions that they are difficult to track in their entirety. Careful monitoring of community infrastructure, SHG, PG and FNG funds at the village level will be needed to ensure that funds are used properly.



53. **Stakeholders.** One new risk area which accompanies the AF is the difficulty in coordinating with the other ministries, local government authorities, World Bank and other development partners working on other Nutrition Convergence projects. Coordination with the AFN implementation team in MAF, and the overall performance of AFN in relation to the AF activities also constitutes a risk to overall success of the AF. So as not to overwhelm target communities and provide complementary support, strong coordination mechanisms are needed. The Ministry of Planning and Investment (MPI) has agreed to take on this role, coordinating across the World Bank financed projects. Another broader PRF risk is the disappointment of provinces that are left out of the AF and the pressure this could bring on PRF management to extend resources to those provinces.

IV. APPRAISAL SUMMARY

A. Economic and Financial Analysis

54. The Economic and Financial Analysis of the project estimates the costs and benefits of the project from the perspective of project beneficiaries (financial analysis) and from the perspective of society and the economy (economic analysis), to assess the viability of the proposed investments. The methodology is a cost-benefit analysis that estimates the costs and benefits of the project and the activities supported by the project.

55. The benefits of the additional financing come primarily from i) Component 1: The Community Development Sub-Grants and ii) Component 4: Nutrition Enhancing Livelihood Development. Component 4 activities that will generate benefits are primarily the village SHGs and the income generating activities financed through SHG revolving loans, grants to producer groups and child nutrition support activities. The nutrition support activities include, but are not limited to, providing improved cooking stoves, providing mills to prepare faster-cooking meals for infants, home nutrition gardens, group cooking activities and training for the preparation of nutrition food. These activities will have benefits not only in the short term (e.g.- faster food preparation time and access to more nutritious foods), but also in the long term, mainly improved nutrition. The economic analysis section below discusses the benefits of improved nutrition, which can be summarised as cost savings resulting from reduced mortality and/or morbidity and productivity enhancement.

56. For infrastructure sub-projects and SHG loans, the investments will depend on demand by beneficiaries. The models chosen represent a range of potential activities mostly based on the investments that took place under PRF II and so far under PRF III. For producer groups, which are a new activity, the lack of data constrained the choice of the model. The models are summarised below:



Figure 1. Description of Activity Models

Models	Without project	With project
Infrastructure sub-projects		
Irrigation	No infrastructure; one season and lower yields	Higher yields; two seasons
Road	No infrastructure: higher transport costs	Lower transport costs
Water	No infrastructure: high cost of fetching water	Lower costs of fetching water
Livelihood and Nutrition		
Cook stoves	Cooking with traditional stoves	Improved stove: gain in time
Nutrition benefits	A higher stunting rate results in high health care costs and lower lifelong earnings	A lower stunting rate reduces health care costs and increases lifelong earnings
Self Help Group Loans		
Pig fattening	Seasonal labour	Investment in pig fattening through a loan
Poultry	Seasonal labour	Investment in chicken raising through a loan
Weaving	Seasonal labour	Weaving in the dry season through a loan
Production Groups		
Chicken with cutting-machine	Investment in chicken raising through a loan	Cheaper feeding costs

Results of the Financial Analysis

57. **The results of the Financial Analysis** show that the proposed activities are overall very profitable, with positive Net Present Values (NPVs) and Internal Rates of Return (IRR) above the discount rate of 10 percent. The benefits/costs ratios (B/Cs) are not available for some models, where there are no additional revenues or no additional costs⁸.

⁸ For instance, for the cook stove model, there are only reduced costs, but not additional revenues.

**Figure 2. Results of the Financial Analysis**

Results of the Financial Analysis	NPV, '000 LAK	NPV, USD	IRR	B/C Ratio
Irrigation	447,366	51,677	89%	2.3
Road	383,307	44,277	29%	1.7
Water	538,747	62,233	70%	2.4
Cook stoves	125	14	21%	NA
Pig fattening	9,979	1,153	NA	1.6
Poultry	3,016	348	206%	1.0
Weaving	7,585	876	NA	1.3
Chicken with cutting-machine	53,385	6,167	NA	NA

Results of the Economic Analysis

58. The results of the Economic Analysis over a 20-year period, which includes all the activities previously described, including the nutrition benefits, show that the project is very profitable, with an NPV of LAK 297 billion, corresponding to US\$34.3 million, and an Economic Rate of Return of 27.2 percent. This result is very satisfactory, particularly because some of the benefits are not quantified, including the job creation for infrastructure maintenance, the time saved preparing meals through the mills and the health benefits of improved cooking stoves through reduced indoor air pollution.

Figure 3. Results of the Economic Analysis

Discount rate	6.0%
NPV, LAK	297,242,012,558
NPV, USD	34,335,453
ERR	27.2%

B. Technical

59. The extensive experience PRF has gained from fifteen years of village, district planning, and community infrastructure implementation, is captured in several operational manuals which will continue to serve as a quality assurance mechanism for infrastructure investments in the AF project. A Technical, Utilization and Beneficiary Satisfaction Assessment conducted in 2018 in a selection of different infrastructure subproject types (i.e. road rehabilitation, schools, and water supply) found construction to be of good quality and cost effective. Infrastructure financed under the earlier PRFII operation was also found to be in good condition, with only one percent of technical ratings below specification.

60. The lessons from an initial pilot of Road Maintenance Groups (RMGs) have been applied to the development and refinement of an RMG Manual which has been used to scale up the activity during the parent project duration. RMGs will continue to be utilized during the AF project. A technical evaluation as well as an impact evaluation of RMGs which are planned for later in 2019 will be incorporated into a revised RMG Manual to strengthen the effectiveness of their use. A Community Force Account (CFA) Manual has also been developed based on lessons from several pilot subproject operations including road rehabilitation, irrigation and water supply. As with the overall PRFIII Project Operations Manual, these



operational manuals and their associated training materials constitute a strong basis for quality infrastructure construction, operations and maintenance.

61. Under the earlier PRFII project, various challenges emerged in the establishment and operations of SHGs. Many members were not repaying their loans and SHGs were not meeting. Incremental improvements have been made during the implementation of the PRFIII parent project, and a Performance Assessment Tool is now being applied to monitor key performance areas and to take corrective actions to improve group performance and sustainability. As assessed early in 2019, 60 percent of SHGs are operating “very well,” scoring 80-90 percent out of 100. The SHG Manual has been revised to incorporate lessons and now serves as a clear, concise basis for scaled-up SHG establishment and operations.

62. A 2017 rapid study of the impacts of village nutrition centers financed under PRF II, and supported with technical assistance during PRF III, informed the design of FNGs, which will be scaled up through the AF project. The FNG design is quite similar to the design of village nutrition centers, except that they will not include the construction of dedicated buildings, nor ongoing food subsidies. Food subsidies will be an interim measure, while home nutrition gardens are established for home food production, and SHG investments yield animal production for home consumption. The Nutrition Manual developed for the AF operation captures the earlier lessons and clearly articulates the steps needed to effectively implement all nutrition activities planned under subcomponent 4.2. The Clean Cook Stove pilot supported under the parent project found high demand and willingness to pay among households in two villages in Huaphan province. The development of a sustainable pellet (cook stove fuel) production model is needed, and this will be developed and tested with support from activities financed through the World Bank’s Energy Sector Management Assistance Program trust fund.

C. Financial Management

63. Finance staff will remain at central and district level under the AF. The PRF central finance team will continue to be responsible for financial management and disbursement of the project. Staff at district level will have additional responsibilities, and hence their terms of reference have been revised. Under the AF, funds will flow directly from the central level bank account to district bank accounts, and onto beneficiary bank accounts. District finance and technical staff will ensure that requirements for disbursement are met before requesting funds be transferred to beneficiary bank accounts. The Finance and Administration Manual has been updated to reflect these changes. Current project auditors will continue to audit AF, and there will be a revision to the audit terms of reference. It will include an additional requirement for the auditors to select at least 10 percent SHGs who receive seed grants during the year to review their compliance with respective guidelines and ensure that funds have been used for the intended purposes.

D. Disbursement

64. The existing Designated Account (DA) will be used for the AF. The ceiling of the Designated Account will be reduced to US\$2,250,000 and the minimum value of application for direct payment and reimbursement will be US\$200,000. Other disbursement arrangements remain unchanged. Disbursements shall be made against the following expenditure categories:

**Table 2: Disbursement Categories, PRFIII and PRFIII-AF**

Category	PRFIII (SDR million)	Share of expenditure financed by IDA	PRFIII-AF (SDR million)	Share of expenditure financed by IDA
Goods, works, non-consulting services, consultants' services with respect to the Original Credit, consulting services with respect to the Additional Credit, Sub-grants, SHG Grants, PG Grants, Training and Workshops, and Operating Costs	21,300,000	100%	16,600,000	100%
Total	21,300,000		16,600,000	

E. Procurement

65. Procurement under the AF will be carried out in accordance with Procurement Regulations for Investment Project Financing (IPF) borrowers dated July 1, 2016, revised November 2017 and August 2018; instead of Bank Procurement Guidelines as for the parent project. The World Bank's Systematic Tracking of Exchanges in Procurement (STEP) will be used for all procurement transactions i.e. preparing and updating of Procurement Plans and processing, clearing, communicating, and tracking of procurement activities.

66. The main procuring entity under the project remains the PRF Central Office in Vientiane which will carry out the procurement of goods, works and services required for project management, while beneficiary communities will carry out procurement for small value works and goods for community infrastructure subprojects. Use of contractors for community infrastructure will be more limited under the AF project than under the parent project as the Community Force Account (CFA) approach will be used more frequently. Request for Bids (National market approach), request for quotations, or direct selection may also be used, as appropriate. The Community Procurement Manual has been updated to reflect AF project adjustments.

67. The PRF Central Office will provide procurement training to PRF district staff YGs that are responsible for infrastructure, and these district staff and YGs will provide procurement training to Village Implementation Teams (VITs) and assist them in conducting procurement activities. The PRF Central Office has sufficient capacity and experience to undertake procurement under the project and supervise communities in their procurement activities.

F. Social (including Safeguards)

68. Nine safeguard policies remain triggered including two social safeguard policies - Indigenous Peoples (OP/BP 4.10) and Involuntary Resettlement (OP/BP 4.12). The overall safeguards rating for PRFIII has been Satisfactory. The reviews of safeguard performance by the ongoing project conducted during AF project preparation did not find any major social impacts or significant loss of private land or assets. All affected people were direct beneficiaries of respective subprojects, and no physical relocation of households and assets occurred. No household lost more than 5 percent of their total productive assets.



The existing Compensation and Resettlement Policy Framework (CRPF) applied under PRFIII has been updated in the Environmental and Social Management Framework (ESMF) to reflect changes in the scope and design of the project and to take into account the lessons learned from the parent project.

69. The AF will be implemented in areas where numerous ethnic groups are residing. Of the 12 target districts, 10 are already covered by the parent project. The core principles of community-driven development and inclusiveness, used by the parent project, will continue to be applied to ensure that ethnic minority groups and vulnerable people can access project information, and participate in and receive culturally compatible benefits in accordance with the Ethnic Group Policy Framework. Under the AF, the Ethnic Group Policy Framework has been revised to reflect changes in project design and scope. The current feedback and resolution mechanism, which is functioning effectively, will continue to be applied and strengthened under the AF, with simple and low-cost technology, including the introduction of a smart phone “hotline” and tablets available for communities.

70. The AF will ensure that all bidding documents and contracts for civil works, where applied under the Project include the obligation of contractors, and subcontractors and supervising entities to: (a) comply with the relevant aspects of Safeguard Instruments; (b) adopt and implement measures to assess and manage the risks and impacts of labor influx and workers’ camps; (c) adopt and enforce codes of conduct that should be provided to and signed by all workers, detailing measures on environmental, social, health and safety, gender-based violence and violence against children; all as applicable to such civil works commissioned or carried out pursuant to said contracts.

G. Environment (including Safeguards)

71. Environmental category B will remain applicable for the AF project. In addition to the two social safeguard policies, seven environmental and other safeguard policies will continue to be triggered including OP/BP 4.01 (Environmental Assessment), OP/BP 4.04 (Natural Habitats), OP/BP 4.09 (Pest Management), OP 4.36/BP (Forests), OP 4.37/BP (Safety of Dams), OP/BP 4.11 (Physical and Cultural Resources), OP/BP 7.50 (Projects on International Waterways), as described in the ISDS. Overall safeguards compliance of the parent project has been rated satisfactory since 2016. No major environmental impacts are anticipated under the AF because the amount of community grants under Component 1 to be allocated to each village will become smaller and more selective for productive infrastructure investments which will likely be completed within the first or second year of the AF project. Some minor and site-specific impacts may be caused by small infrastructure under Components 1 and 4. Like the parent project, the AF subprojects could not be identified before project appraisal, therefore the existing Environmental and Social Management Framework (ESMF) has been updated to be used under the AF and subsequently publicly disclosed in English on May 7, 2019 and in Lao on May 8, 2019, which includes the updated Compensation and Resettlement Policy Framework, Ethnic Groups Planning Framework, and Pest Management Plan. The ESMF includes guidelines for the process of impact screening, identifying and developing mitigation measures for implementation and monitoring of subprojects. As required, Environmental and Social Management Plans (ESMPs), or commonly called EMPs, will be developed to be applied under the subproject. ESMPs/EMPs and Environmental Codes of Practice (ECOP), where applicable, will be incorporated into construction contracts for civil works.

72. OP/BP 7.50, which was triggered under the original project for the construction and rehabilitation of irrigation and water supply schemes built along tributaries of the Mekong River, will also be triggered



under the AF. Given that the AF will selectively finance the rehabilitation of existing small-scale irrigation and water supply schemes, which are within the scope of the original project of which the riparian states have already been notified, the activities under the AF can be considered as covered by the original notification letter and there will be no need for any additional or supplemental notification.

73. Under the new AF institutional structure, the implementation arrangements will be changed, with greater responsibility for safeguard implementation decentralized to district offices, with back-up support from young graduates. Central-level staff will supervise and provide training and coaching for district staff and young graduates, who will be responsible for supporting communities to identify environmental and social impacts, apply mitigation measures, and monitor all safeguards for compliance. Concerned government agencies, and the provincial and district Offices of Natural Resources and Environment will be supported to review and monitor safeguard policy compliance of subprojects, in line with relevant national legislation.

V. WORLD BANK GRIEVANCE REDRESS

74. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org



VI SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Project's Development Objectives	✓	
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Implementing Agency		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Procurement		✓
Other Change(s)		✓

VII DETAILED CHANGE(S)

PROJECT DEVELOPMENT OBJECTIVE

Current PDO

To improve access to basic services for the Project's targeted poor communities. The PDO would be achieved through inclusive community and local development processes with emphasis on ensuring sustainability.

Proposed New PDO

To improve access to community-prioritized basic services as well as to support the production and consumption of nutritious foods in the Project's targeted poor communities.



COMPONENTS

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
Component 1 ? Community Development Sub-Grants	26.40	Revised	Component 1 - Community Development Sub-Grants	32.66
Component 2 ? Local and Community Development Capacity Building	3.30	Revised	Component 2 - Local and Community Development Capacity Building	4.51
Component 3 ? Project Management	5.40	Revised	Component 3 - Project Management	8.30
Component 4 ? Nutrition Enhancing Livelihood Development	0.90	Revised	Component 4 - Nutrition Enhancing Livelihood Development	13.03
TOTAL	36.00			58.50

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Current Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-58270	Effective	30-Jun-2020	30-Jun-2020	30-Jun-2024	30-Oct-2024

Expected Disbursements (in US\$)

Fiscal Year	Annual	Cumulative
2016	0.00	0.00
2017	4,500,000.00	4,500,000.00
2018	10,500,000.00	15,000,000.00
2019	9,500,000.00	24,500,000.00
2020	7,000,000.00	31,500,000.00
2021	5,000,000.00	36,500,000.00
2022	5,000,000.00	41,500,000.00
2023	5,000,000.00	46,500,000.00
2024	7,000,000.00	53,500,000.00



2025	5,000,000.00	58,500,000.00
SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)		
Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Substantial	● Moderate
Macroeconomic	● Substantial	● Substantial
Sector Strategies and Policies	● Moderate	● Moderate
Technical Design of Project or Program	● Moderate	● Substantial
Institutional Capacity for Implementation and Sustainability	● Substantial	● Substantial
Fiduciary	● Substantial	● Substantial
Environment and Social	● Moderate	● Moderate
Stakeholders	● Moderate	● Substantial
Other	● Low	● Low
Overall	● Moderate	● Substantial

LEGAL COVENANTS – Poverty Reduction Fund III Additional Financing (P168620)

Sections and Description

Institutional Arrangements
Financing Agreement: Schedule 2, Section I.A

Recurrent, Continuous

The Recipient shall make available to the Project Implementing Entity the proceeds of the Financing under a Subsidiary Grant Agreement to be entered into between the Recipient and the Project Implementing Entity, under terms and conditions acceptable to the Association.

Project Manuals and Guidelines
Financing Agreement: Schedule 2, Section I.B

Recurrent, Continuous

The Recipient shall ensure that: (1) the Project is carried out in accordance with the arrangements and procedures set out in the Project Operational Manual; (2) Part 4.1 of the Project is carried out in accordance with the SHG Guidelines and PG Guidelines; and (3) Part 4.2 of the Project is carried out in accordance with the Nutrition Manual, and shall not amend, waive or abrogate any provisions of the manuals and Guidelines unless the Association agrees otherwise in writing.

Financing Agreement: Schedule 2, Section I.B.1



Due date: January 30, 2020

The Recipient shall, by no later than January 30, 2020, update the Project Operational Manual in a manner satisfactory to the Association.

Annual Work Plans and Budgets
Financing Agreement: Schedule 2, Section I.C

Recurrent, Annual

The Recipient shall prepare and furnish to the Association for its no-objection no later than November 30 of each fiscal year an annual work plan and budget during the implementation of the Project containing relevant Project activities and expenditures proposed to be included in the Project in the following fiscal year, including a specification of the sources of financing and the Recipient’s proposed counterpart share in the cost of the AWPB.

SHG Grants and PG Grants
Financing Agreement: Schedule 2, Section I.D
Recurrent, Continuous

The Recipient shall make SHG Grants and PG Grants available to eligible SHGs and eligible PGs in accordance with the SHG Guidelines and PG Guidelines, respectively.

Environmental and Social Safeguards
Financing Agreement: Schedule 2, Section I.E

Recurrent, Continuous

The Recipient shall ensure that the Project is carried out in accordance with the provisions of the Safeguards Instruments and the site-specific safeguard plans, not amend, abrogate, repeal, suspend or waive any of their provisions unless the Association agrees otherwise, and report on their status of implementation as part of the project reports.

Conditions

Type	Description
Effectiveness	<p>Type: Condition of Effectiveness Financing Agreement: Article V.01</p> <p>The Supplemental Subsidiary Grant Agreement has been executed and delivered, and all conditions precedent to its effectiveness (other than the effectiveness of the Financing Agreement), have been fulfilled.</p>



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Lao People's Democratic Republic
Poverty Reduction Fund III Additional Financing

Project Development Objective(s)

To improve access to community-prioritized basic services as well as to support the production and consumption of nutritious foods in the Project's targeted poor communities.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Improve access to basic services as well as the production and consumption of nutritious foods (Action: This Objective has been Revised)							
Direct project beneficiaries (Number)		567,762.00	640,000.00	680,000.00	687,000.00	690,000.00	876,700.00
Action: This indicator has been Revised	Rationale: To increase the target to reflect scaling up.						
Female beneficiaries (Percentage)		50.00	50.00	50.00	50.00	50.00	53.00
Action: This indicator has been Revised							
Ethnic Beneficiaries (Percentage)		70.00	70.00	70.00	70.00	70.00	70.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
% reduction in time to access a health facility (Percentage)		0.00				0.00	80.00
Action: This indicator has been Revised	Rationale: <i>The original data source is not applicable as it was from PRF II and the coverage area is different.</i>						
% reduction in time to access safe water sources (Percentage)		0.00					80.00
Action: This indicator has been Revised	Rationale: <i>The original data source is not applicable as it was from PRF II and the coverage area for PRF III is different.</i>						
% reduction in travel time from village center to kumban center due to road improvements (Percentage)		0.00				0.00	40.00
Action: This indicator has been Revised	Rationale: <i>The original data source is not applicable as it was from PRF II and the coverage area for PRF III is different.</i>						
% reduction in time to access improved schools (Percentage)		0.00				0.00	80.00
Action: This indicator has been Revised	Rationale: <i>The original data source is not applicable as it was from PRF II and the coverage area for PRF III is different.</i>						
Percentage of children 6–23 months from Farmer Nutrition Group households consuming foods from four or more recommended food groups (Percentage)		0.00					40.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Action: This indicator is New	Rationale: <i>To reflect the increased emphasis on nutrition outcomes with the additional financing, capturing diverse food consumption.</i>						
Kilograms of animal meat produced (Number)	0.00	527,219.00	2,108,877.00	5,454,540.00		5,454,540.00	
Action: This indicator is New	Rationale: <i>Added to reflect the production of SHGs.</i>						

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1 - Community Development Sub-Grants							
% of total project value contributed by the community (Percentage)	11.00					11.00	
Action: This indicator has been Marked for Deletion	Rationale: <i>Experience has shown that this target is beyond the means of many poor communities and they should therefore not be held accountable for something beyond their means. Communities are still encouraged to contribute their resources, but a target will no longer be applied.</i>						
% of sub-project activities of high technical quality (Percentage)	85.00			85.00		85.00	
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
% of PRF built infrastructure in a functioning quality (Percentage)		80.00	80.00	80.00	80.00	80.00	80.00
Action: This indicator has been Revised							
# of sub projects implemented (Number)		1,426.00					3,440.00
Action: This indicator has been Revised <i>Rationale: Target increased to reflect scaling up.</i>							
% of Village Implementation Team (VIT) members that are female (Percentage)		31.00					40.00
Action: This indicator is New							
Number of women selected for Road Maintenance Groups who earn an income, as a % of the number of poor households in village (Percentage)		8.00					16.00
Action: This indicator is New							
Increase in hectares of irrigated area (Percentage)		0.00					50.00
Action: This indicator is New <i>Rationale: There will likely be an increase in investments in irrigation due to the livelihood focus of the additional financing.</i>							



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 2 - Local and Community Development Capacity Building							
% HHs in PRF beneficiary villages voting for village priorities (Percentage)		60.00	70.00	75.00	75.00	75.00	75.00
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
% of PRF KBs participating in DSEDP process promoting PRF KBPs and/or VDPs (Percentage)		0.00	50.00	70.00	75.00	75.00	75.00
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
% of households in PRF beneficiary villages satisfied with the participatory planning process supported by PRF III (Percentage)		75.00			80.00		80.00
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
% of PRF III sub-project prioritized by women (Percentage)		91.00	90.00	90.00	90.00		90.00
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
% of PRF III sub-projects prioritized by ethnic group		70.00	70.00	70.00	70.00	70.00	70.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Percentage)							
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
# of communities able to plan, implement and monitor their activities (Number)		1,124.00					1,736.00
Action: This indicator has been Revised	Rationale: <i>Target increased to reflect scaling up.</i>						
Component 3 - Project Management							
% of registered grievances that are addressed according to agreed procedures (Percentage)		90.00	90.00	90.00	90.00	90.00	90.00
Action: This indicator has been Revised	Rationale: <i>This indicator was revised to add a description of the indicator as this was not present in the results framework for the original project.</i>						
Component 4 - Nutrition Enhancing Livelihood Development							
% of SHGs with NPLs 4% and below (Percentage)		60.00	60.00	70.00	70.00	70.00	70.00
Action: This indicator has been Marked for Deletion	Rationale: <i>Indicator is not appropriate for measuring SHG repayments.</i>						
# of individuals using loans from SHGs (Number)		4,054.00			2,200.00		34,000.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Action: This indicator has been Revised	Rationale: Target revised to reflect scaling up						
% of Village Self-Help Group Management Committee (VSMC) members that are female (Percentage)	0.00						65.00
Action: This indicator is New							
Number of Farmer Nutrition Group member households (Number)	0.00	72,000.00					14,300.00
Action: This indicator is New	Rationale: To reflect the addition of the Farmer Nutrition Group activity to the project.						
% of SHG members which take at least two loans (Percentage)	0.00	35.00	35.00	50.00	80.00		80.00
Action: This indicator is New							

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Direct project beneficiaries	Total number of individual household members in households benefiting from community infrastructure	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team



	and/or SHG support				
Female beneficiaries	Based on the assessment and definition of direct project beneficiaries, specify what percentage of the beneficiaries are female.	Ongoing	PRF MIS	PRF MIS forms	PRF M&E Team
Ethnic Beneficiaries					
% reduction in time to access a health facility	Percentage change in the estimated walking time in terms of minutes to access the nearest health facility before the PRF infrastructure investment was operational and afterward, as estimated by a focus group of male and female village members.	Ongoing	PRF MIS Forms	MIS forms filled out and verified at the time of subproject financing requests to assess the before-subproject times. Focus groups with village members after subproject completion to assess after-subproject times.	PRF M&E Team
% reduction in time to access safe water sources	Percentage change in the estimated walking time in terms of minutes to access the nearest safe water source before the PRF infrastructure investment was operational and afterward, as estimated by a focus group of male and female village members.	Ongoing	PRF MIS	MIS forms filled out and verified at the time of subproject financing requests to assess the before-subproject times. Focus groups with village members after subproject completion to assess after-subproject times.	PRF M&E Team



<p>% reduction in travel time from village center to kumban center due to road improvements</p>	<p>Percentage change in the estimated motorcycle time in terms of minutes to from the village center to the kumban center before the PRF infrastructure investment was operational and afterward, as estimated by a focus group of male and female village members.</p>	<p>Ongoing</p>	<p>PRF MIS</p>	<p>MIS forms filled out and verified at the time of subproject financing requests to assess the before-subproject times. Focus groups with village members after subproject completion to assess after-subproject times.</p>	<p>PRF M&E Team</p>
<p>% reduction in time to access improved schools</p>	<p>Percentage change in the estimated walking time in terms of minutes to access the nearest school before the PRF infrastructure investment was operational and afterward, as estimated by a focus group of male and female village members.</p>	<p>Ongoing</p>	<p>PRF MIS</p>	<p>MIS forms filled out and verified at the time of subproject financing requests to assess the before-subproject times. Focus groups with village members after subproject completion to assess after-subproject times.</p>	<p>PRF M&E Team</p>
<p>Percentage of children 6–23 months from Farmer Nutrition Group households consuming foods from four or more recommended food groups</p>	<p>Percentage of children, 6-23 months old, from Farmer Nutrition Group households who are reported to have consumed at least four out of the 9 food groups (using a classification of food groups based on international</p>	<p>Twice</p>	<p>Household survey conducted as part of World Bank nutrition convergence approach.</p>	<p>Household survey</p>	<p>Contracted firm</p>



	recommendations) during the 24 hours preceding the time of interview out of the number of children 6-23 months from households that are beneficiaries of the FNG activities.				
Kilograms of animal meat produced	Total kilos of animal meat (chickens, pigs and goats) produced based on the average live weight per type of animal times the total number of each animal produced by SHG members with funds borrowed from the SHG revolving fund or Livelihood Investment Fund for Producer Groups	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
% of total project value contributed by the community					
% HHs in PRF beneficiary villages voting for village priorities	This is the total number of total households in all beneficiary villages divided by the number of households that participate	Ongoing	PRF MIS	PRF MIS forms	PRF M&E Team



	in sub-project selection meetings.				
% of registered grievances that are addressed according to agreed procedures	This is the total number of grievance messages received by paper, phone or text, which have been satisfactorily addressed and recorded in the PRF MIS system.	Ongoing	PRF MIS	PRF MIS grievance register with grievances received by paper submission at meetings as well as by phone and sms message	PRF M&E Team
% of SHGs with NPLs 4% and below					
% of sub-project activities of high technical quality	This is the total number of sub-projects rated as being of "high" quality by a consultant contracted to evaluate the technical quality of construction of a selection of completed sub-projects.	Three times, at baseline, midterm and endline.	Consultant's report	Technical audit	Contracted firm
% of PRF KBs participating in DSEDP process promoting PRF KBPs and/or VDPs	This is the total number of District Socioeconomic Development Planning meetings divided by the number of meetings in which a Kumban representative was present.	Ongoing	PRF MIS	PRF MIS form	PRF M&E Team
# of individuals using loans from SHGs	The number of SHG members that have borrowed from the SHG revolving fund.	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team



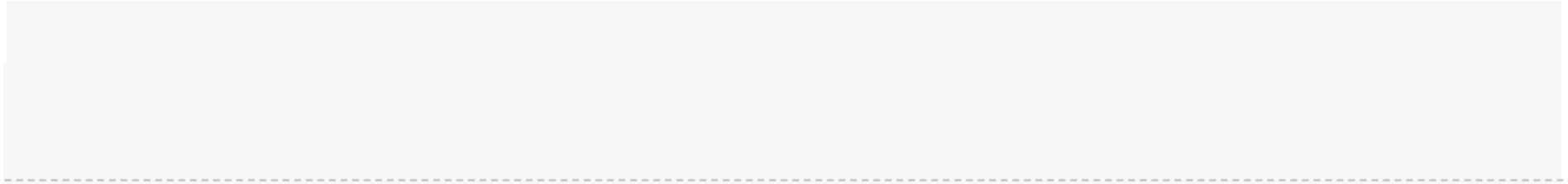
% of PRF built infrastructure in a functioning quality	Quality checks at the time of subproject completion as well as 6-month and 12-month follow-up checks will assess whether the infrastructure investments are functioning as intended.	Semi-annual	PRF MIS forms	PRF staff visits each subproject site to conduct a quality check and a score is used to determine whether the subproject infrastructure is considered to be functioning or not.	PRF
% of households in PRF beneficiary villages satisfied with the participatory planning process supported by PRF III	This is the percentage of households which say that they are satisfied or highly satisfied in response to a survey question.	Three times, at baseline, midterm and endline	Consultants report	Focus Group survey of households	Contracted firm
% of Village Self-Help Group Management Committee (VSMC) members that are female	Percentage of VSMC members that are female	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team
# of sub projects implemented	Number of community infrastructure subprojects constructed and operational	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team
% of PRF III sub-project prioritized by women	This is the total number of approved sub-projects divided by the number of sub-projects which were rated as the highest priority by women's groups during the village planning and sub-project prioritization process.	Ongoing	PRF MIS	PRF MIS form	PRF M&E Team



Number of Farmer Nutrition Group member households	The total number of members of all Farmer Nutrition Groups supported by the project	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team
% of Village Implementation Team (VIT) members that are female	Percentage of women members of the Village Implementation Team	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team
% of PRF III sub-projects prioritized by ethnic group	This is the total number of sub-projects divided by the total number of highest sub-project priority projects identified by a group of ethnic minority participants during the community sub-project prioritization process.	Ongoing	PRF MIS	PRF MIS form	PRF M&E Team
% of SHG members which take at least two loans	The percentage of total SHG members who have borrowed at least twice from the SHG. This measurement does not require full repayment of the second loan, only the taking of the loan.	Ongoing	PRF MIS	PRF MIS calculation based on individual member data.	PRF M&E
Number of women selected for Road Maintenance Groups who earn an income, as a % of the number of poor households in village	Data on the number of women earning an income comes from household surveys at baseline and endline. Data on the number of poor households comes from village level PRF poverty	Twice	Household survey, baseline and endline.	Household survey	Data collection firm



	<p>ranking data*.</p> <p>*Poor households are households classified as either “poor” or “poorest” in the PRF poverty rankings as opposed to “middle” or “better off” (these households were prioritized for RMG jobs).</p> <p>Out of the 85 RMG villages, there is PRF poverty ranking data for 67 villages. The data from these villages will be used for this indicator.</p>				
# of communities able to plan, implement and monitor their activities	Number of villages that are trained by PRF to prepare Village Development Plans	Ongoing	PRF MIS	PRF MIS Forms	PRF M&E Team
Increase in hectares of irrigated area	Percentage increase in the area of land that is irrigated for agriculture or fisheries production as a result of subproject infrastructure investments	Twice, once at project design stage and a second assessment upon subproject completion	PRF MIS	Communities prepare a subproject design form and the verification is done by PRF at the time of subproject completion	PRF





ANNEX 1: Economic and Financial Analysis

Introduction

1. This appendix presents the hypothesis and methodology used to construct the Economic and Financial Analysis (EFA) of the Additional Financing of US\$22.5 million for the Poverty Reduction Fund III Project in Laos. The objective of the analysis is to estimate the costs and benefits of the project from the perspective of project beneficiaries (financial analysis) and from the perspective of society and the economy (economic analysis), to assess the viability of the proposed investments.

2. The methodology is a cost-benefit analysis that estimates the costs and benefits of the project and the activities supported by the project. The data used for the analysis come from a range of sources including: i) PRF III M&E data; ii) an economic analysis of PRF sub-projects based on a field survey conducted in 2015; iii) a Technical, Cost Effectiveness and Sustainability Audit from April 2016; iv) the Project Design Report of the IFAD Agriculture for Nutrition project, including the Economic and Financial Analysis; v) value chain studies conducted in the context of the IFAD Agriculture for Nutrition Project⁹; vi) a Field Report on the Super Clean Cook Stove training (Mimi Moto)¹⁰ as well as a Gender and Consumer Acceptance Survey of these stoves; and vii) literature and statistical data on Laos and on nutrition.

3. The benefits of the additional financing come primarily from i) Component 1: The Community Development Sub-Grants and ii) Component 4: Nutrition Enhancing Livelihood Development. Component 4 activities that will generate benefits are in particular the SHGs and the income generating activities financed through SHGs revolving loans, grants to producer groups and nutrition support activities. The nutrition support activities include, but are not limited to, providing improved cooking stoves, providing mills to prepare faster-cooking meals for infants, home nutrition gardens, group cooking activities and training for the preparation of nutrition food¹¹. These activities will have benefits in the short term (e.g.- faster food preparation time and access to nutrition foods) but also in the long term, mainly improved nutrition. The economic analysis section of this appendix discusses the benefits of improved nutrition, which can be summarised as cost savings resulting from reduced mortality and/or morbidity and productivity enhancement.

4. Different models were prepared to represent the project activities proposed by the project as part of Components 1 and 4. For each model, a **without project (WOP) situation** is compared to a **with project (WP) situation**. In the WOP situation, we consider the situation of beneficiaries prior to the project intervention¹² while in the WP situation we consider the beneficiaries' investments and activities enabled by project support. A model is considered as profitable if the beneficiaries can derive more income following the project investments.

⁹ Studies conducted in cooperation with FAO Technical Assistance by Thiphavong Boupha, Olayvanh Singvilay and Anton Glaeser in December 2017.

¹⁰ The training took place in Nakham village and Piengyam village, Xiengkhor District, Houaphan Province from 28th March to 2nd April 2018.

¹¹ In addition, the other project activities will also contribute to improved nutrition. For instance, income-generating activities through the SHGs and the producer groups will also contribute to improved nutrition through income generation, irrigation schemes will lead to increased agricultural production and water systems will contribute to improved hygiene.

¹² Technically, the WOP is a representation of the activity opportunity cost of an activity and, as such, it should model the evolution of beneficiaries' economic activities without the project. In practice, the models here consider a static WOP situation, with the exception of the long-term benefits of the nutrition activities.



5. For infrastructure sub-projects and SHG loans, the investments will depend on demand by beneficiaries. The models chosen, listed in Figure 1.1, represent a range of potential activities mostly based on the investments that took place under PRF II and PRF III. For producer groups, which are a new activity, the lack of data constrained the choice of the model. For the nutrition activities, the “direct” benefits of cooking stoves (i.e.- reduced time spent cooking and collecting wood) are modelled in the financial and economic analysis while the benefits of improved nutrition are modelled only in the economic analysis. The models are summarised below:

Figure 1.1. Description of Models

Models	Without project	With project
Infrastructure sub-projects		
Irrigation	No infrastructure; one season and lower yields	Higher yields; two seasons
Road	No infrastructure: higher transport costs	Lower transport costs
Water	No infrastructure: high cost of fetching water	Lower costs of fetching water
Livelihood and Nutrition		
Cook stoves	Cooking with traditional stoves	Improved stove: gain in time
Nutrition benefits	A higher stunting rate results in high health care costs and lower lifelong earnings	A lower stunting rate reduces health care costs and increases lifelong earnings
Self Help Group Loans		
Pig fattening	Seasonal labour	Investment in pig fattening through a loan
Poultry	Seasonal labour	Investment in chicken raising through a loan
Weaving	Seasonal labour	Weaving in the dry season through a loan
Production Groups		
Chicken with cutting-machine	Investment in chicken raising through a loan	Cheaper feeding costs

6. All models include all the costs necessary to the activity, including labour costs, vaccinations, feeding and pen construction costs in the case of the livestock models, and the cost of financing in the form of interest for SHGs loans. For all activities, the labour costs are the opportunity cost of family labour, as opposed to wage labour. This was valued at 60 percent of wage labour, as family labour is used. Time saved as a result of the infrastructure built was also valued at the opportunity cost of labour. A caveat to this approach is that the opportunity cost of labour is likely to vary significantly from one household to another. The opportunity cost of labour used in models varies between the dry season and the rainy season, reflecting the changes in wages.

II. Financial Analysis



7. In the financial analysis, each model compares the costs and benefits of the beneficiaries' activity **with project** and **without project**. This analysis aims to ensure that project beneficiaries have a financial incentive to participate in project activities (through increased revenues) and that they will be able to sustain the proposed investments.

8. The financial analysis considers the investment from the perspective of a beneficiary, a beneficiary household or a village. The nutrition activities are not included in the financial analysis, but in the economic analysis. All costs are included in the activity models and valued at market costs or opportunity cost (for labour), whether the project or beneficiaries are paying, and all benefits are valued at market cost or opportunity cost (for time savings). Products that are consumed by the household (rice, eggs) are also valued at market costs. Because of these two methodological choices, the additional benefits of a model do not correspond to the additional cash flow.

Methodology and Assumptions

9. The main assumptions for each model or group of models are described below:

10. Infrastructure sub-projects:

- a. Costs include the building and yearly maintenance costs over the lifespan of the infrastructure. The costs of using the infrastructure for beneficiaries are not added to avoid double counting of costs, because the money collected from user fees are used to cover the maintenance costs.
- b. Projects are considered over a lifetime of 10 years for the financial analysis, although most projects would be expected to last longer if properly maintained.
- c. A sensitivity analysis considers whether the infrastructure remains profitable in the event of a reduced lifetime, 7 years as opposed to 10; a 20 percent increase in costs; and a 20 percent decrease in benefits.
- d. Time savings and other benefits resulting from the infrastructure are based on the PRF II and PRF III experience, including the economic analysis of some of the infrastructure projects. This analysis in turn was based on surveys of beneficiaries.
- e. For the gravity irrigation system, benefits come from the 38 percent increase in paddy rice yields¹³ and the possibility of growing crops off-season. The model considers a gravity irrigation scheme that reaches 12 hectares, corresponding to about six households. In practice, additional households would presumably benefit from the irrigated land off-season, because the high labour-intensity of vegetable production means that more households would group for vegetable production.
- f. For roads, benefits come from the household increase in income as a result of the road (for instance, from additional commercialisation opportunities) and from time savings.
- g. For water, the benefits come from time saving for collecting water and from additional water consumption. The data on these are computed based on the methodology of the Economic Analysis done as part of PRF II, with some modifications. The costs of collecting additional water were added.
- h. The outreach of the infrastructure, the share of village households who benefit from the infrastructure, is estimated at 40 percent for roads. The data on the economic analysis of PRF

¹³ Based on data collected as part of PRF III, paddy rice yields increased on average from 2.41 tonnes/ha to 3.33 tonnes/ha, an increase of 38%.



roads assumed that 60 percent of households in a village benefitted from the road. However, because the additional financing will focus more on agricultural roads (with a focus on access to fields rather than the village), 40 percent was chosen as a more realistic and conservative assumption. For water, the outreach is 100 percent as, from PRF experience, all households used the water system.

11. Self-Help Groups

- a. Interest rates are 1 percent per month, resulting in a 12 percent interest for a one-year loan, in line with SHG experiences. In all cases, the cash-flow (assuming no home consumption) should allow the household to pay back the loan after a year. The activities modelled are in line with the SHG chosen activities and short-term activities, accommodating for the one year loans.
- b. The poultry model is based primarily on a typical model proposed in the SHG guidelines, whereby hens and a rooster are purchased to produce and fatten small chicks. The model assumes that 54 percent of eggs turn into chickens, and that the remaining eggs are eaten. Vaccination is included in the model.
- c. For pigs, the model considers the fattening of pigs. Vaccination is included in the model.
- d. For weaving, the model considers the weaving of skirts off-season, when the opportunity cost of labour is lower, because weaving is a labour-intensive activity.

12. **For the Producer Groups**, the model considers the purchase of a banana stem cutting machine, which enables the preparation of chicken feed using banana stems instead of expensive industrial feed.

13. A model also seeks to present a cost-benefit analysis of **improved cook stoves**. Using improved cook stoves, households can save an average of 86 minutes per day in cooking time, and no longer need to collect wood for traditional stoves. It is assumed that improved stoves reduce the time spent collecting wood by two thirds, as no specific data on time savings was available. However, the model does not capture all the benefits of the improved stoves, such as the reduced environmental impact of pellets compared to coal, and the health benefits that result from a reduction in indoor air pollution.

Results of the Financial Analysis

14. **The results of the Financial Analysis** show that the proposed activities are overall very profitable with positive NPVs and IRRs above the discount rate of 10 percent. The benefits/costs ratios (B/Cs) are not available for some models, where there are no additional revenues or no additional costs¹⁴.

15. Of all the SHG activities modelled, the pig fattening appears particularly profitable. This result is consistent with the fact that investments in pigs was by far the most popular SHG activity in 2018, amounting to 65 percent of loan investments in 2018. The cash flow analysis¹⁵ confirms that beneficiaries should be able to pay-back their SHG loan after a year. For the SHG activities, the WOP is assumed to be

¹⁴ For instance, for the cook stove model, there are only reduced costs, but not additional revenues.

¹⁵ A simplified one, which simply removes labour costs but considers that all products were sold (no home-consumption).



seasonal labour, daily low-skilled paid work for another household/firm, to account for additional time required to conduct the activities. If beneficiaries do not have access to seasonal labour opportunities, they will derive even more additional benefits from the SHG activities.

Figure 1.2. Results of the Financial Analysis

Results of the Financial Analysis	NPV, '000 LAK	NPV, USD	IRR	B/C Ratio
Irrigation	447,366	51,677	89%	2.3
Road	383,307	44,277	29%	1.7
Water	538,747	62,233	70%	2.4
Cook stoves	125	14	21%	NA
Pig fattening	9,979	1,153	NA	1.6
Poultry	3,016	348	206%	1.0
Weaving	7,585	876	NA	1.3
Chicken with cutting-machine	53,385	6,167	NA	NA

III. Economic Analysis

16. The economic analysis compares the situation **with-project** to the situation **without-project**, similarly to the financial analysis. The additional benefits are the benefits attributed to the project. The analysis is done over a 20-year period, using a discount rate of 6 percent.

Methodology and Assumptions

17. Economic prices were computed by removing taxes, subsidies and other transfers. A shadow exchange rate was computed using the formula below. A conversion factor of 0 was used for interest rates, which are a transfer in the economy.

Figure 1.3 - Computation of the Shadow Exchange Rate¹⁶

$$SER = OER \cdot \frac{[(M + Tm) + (X - Tx)]}{(M + X)}$$

¹⁶ SER: shadow exchange rate; OER: official exchange rate; M: imports; Tm: tariffs on imports; X: exports; Tx: tariffs on exports

Figure 1.4 - Conversion Factors

Conversion Factors	Financial price (or index)	Economic Price	Conversion Factor
Exchange rate	8,657	8,887	1.0
Non-tradable and agricultural products	1.0	1.0	1.0
Livestock	1.0	1.0	1.0
Infrastructure	1.0	0.9	0.9
Inputs or outputs with VAT	1.0	0.9	0.9
Inputs or outputs without VAT	1.0	1.0	1.0
Labour	40,000	40,000	1.0
Fuel	1.0	0.7	0.7
Interests on loans	1.0	-	-

18. Following the conversion of financial prices into economic prices, the additional benefits of the modelled activities were aggregated in line with the targets and phasing of the project. For SHG loans, the assumption, based on PRF data¹⁷, is that each member will take an average of 0.397 loans per year, amounting to a total of 40,063 loans over a five-year period.

Figure 1.5. Phasing of Project Activities

Phasing of activities	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Infrastructure sub-projects	84	84	84	84	84	336
Self Help Group grants	1,443	-	962	-	-	2,405
Self Help Group New Members	14,430	-	9,620	-	-	24,050
Self Help Group Members, cumulative	14,430	14,430	24,050	24,050	24,050	24,050
Self Help Group Loans	5,723	5,723	9,539	9,539	9,539	40,063
Cook stoves	50	-	-	-	-	50
Production Groups	-	100	-	-	-	100

19. As the infrastructure sub-projects and the SHG loan activities will be demand based, the distribution of models is an estimate. For the infrastructure sub-projects, the distribution assumes more irrigation investments because of the nutrition and agriculture focus of the additional financing. The distribution of infrastructure sub-projects amounts to a total of 336 sub-projects while remaining within the allocated budget. For the SHGs, distribution of activities was based on the 2018 breakdown of SHG activities. However, because poultry was more popular than pig raising/fattening prior to 2018, and because of its potential impact on nutrition, we assume that there are as many activities in the poultry sector as in the pig sector.

20. For the SHG activities and the Producer Groups, a success rate of 70 percent accounts for the fact that not all the economic endeavours undertaken by beneficiaries would be successful. For instance, beneficiaries might decide to use the additional income for consumption rather than re-invest part of it to continue the activity, the failure to vaccinate animals might lead to a higher mortality rate and/or other technical issues might result in some investments not being successful.

¹⁷ 20,000 loans were taken over a period of 5 years by 10085 SHG members.

Figure 1.6. Phasing of models

Phasing of models	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Infrastructure sub-projects						
Irrigation	65	65	65	65	0	260
Road	10	10	10	10	0	40
Water	9	9	9	9	0	36
Nutrition						
Cook stoves	50	-	-	-	-	50
<i>Self Help Group Loans</i>	0	0	0	0	0	40,063
Pig fattening	2,725	2,725	4,542	4,542	4,542	19,078
Poultry	2,725	2,725	4,542	4,542	4,542	19,078
Weaving	272	272	454	454	454	1,907
<i>Aggregation of SHG activities assuming a 70% success rate</i>	70%					
Pig fattening	1,908	1,908	3,179.70	3,179.70	3,179.70	13,355
Poultry	1,907.82	1,907.82	3,179.70	3,179.70	3,179.70	13,355
Weaving	190.71	191	317.85	317.85	317.85	1,335
<i>Producer Groups</i>	0	0	0	0	0	100
Chicken with machine for cutting banana stems	-	100	-	-	-	100

21. In addition to the models above, the economic analysis seeks to model the **benefits of the nutrition activities**, on the basis of the AFN methodology. Unlike in the AFN EFA, economic benefits are considered to include both the additional revenues and savings from modelled activities and the long-term impact of improving nutrition and reducing stunting. The reduction in stunting would result from the activities of the additional financing of PRF III but also from the other convergence project in the area. The benefits of reduced stunting are primarily very long term: the increased lifelong earnings only start accruing in adult age. The analysis of the nutrition benefits cover a 30-year span¹⁸ to better capture the benefits of the investments, but only the first 20 years are included in the economic analysis, which covers a 20-year span.

22. According to Alderman, Berham and Hoddinott¹⁹, the benefits of stunting reduction can be classified into “1) saving resources that otherwise would have been used (say, by reducing the resources used to deal with mortality or morbidity), and 2) enhancing productivity.”

¹⁸ A 30-year period analysis is very long as it implies making assumptions on the sustainability of activities. However, here, it was important to include a 30-year period to capture the fact that the benefits of the nutrition activities will mainly occur once the children who benefitted from improved nutrition will reach adult age.

¹⁹ Harold Alderman, Jere R. Behrman, John Hoddinott, Economic and Nutritional Analyses Offer Substantial Synergies for Understanding Human Nutrition, *The Journal of Nutrition*, Volume 137, Issue 3, March 2007, Pages 537–544, <https://doi.org/10.1093/jn/137.3.537>



23. Regarding the second point, nutrition affects productivity via its impact on cognitive abilities and access to education. Three mechanisms in particular can be identified: i) malnourished children are likely to receive less education (for instance, due to higher morbidity), ii) malnutrition might delay entry into school and iii) malnutrition reduces the ability to learn. These different mechanisms will also interact with each other. As an illustration, a study in Guatemala observed that children stunted before school age obtained lower scores when tested on reading, vocabulary and non-cognitive ability as adults aged 25 to 42, even after accounting for other variables including grade attainment and age.

24. At a macro level, a 2013 study²⁰ estimates that the impact of malnutrition on the Lao economy amounted to at least US\$200 million annually, representing about 2.4 percent of GDP.

25. In an attempt to capture the impact of the nutrition activities of the project, the economic analysis proposes a simple model. In the model, the benefits of the nutrition activities are two-fold: i) the reduced health care costs (here only considered for the first two years of life) and ii) increased earnings later-on in life, from the age of 15.

26. The main parameters that change from the without project situation to the with project situation is the stunting rate. In both cases, the stunting rate is assumed to start at 33 percent²¹ but the reduction in stunting is faster in the with-project situation, 2.5 percent per year, compared to the without project situation, 0.35 percent per year. These assumptions are based on the AFN model.

27. The model's benefits are based on the savings and additional earnings of non-stunted children compared to stunted children.

- it is assumed that the OOP per year is LAK 600000 for a stunted child under two and 300000 for a non-stunted child under two²², based on an average out-of-pocket (OOP) expenditure of LAK 410000 per year per child under two²³,
- Children who were stunted can expect to earn LAK 16,478,170 while children who were not stunted can expect to earn LAK 20,546,346 per year. This difference is based on an estimated loss of income of 19.8 percent per year in Laos as a result of stunting²⁴. The yearly income for an adult who did not suffer from stunting is assumed to be half the GDP per employed person of US\$4,747 because the project is situated in rural areas, where income is lower. GDP per employed person was computed based on World Bank Indicators data.

28. On the basis of these two parameters, health care costs and expected earnings are computed over a 30-year period for project beneficiaries, assuming that results are sustainable (subsequent generations also have lower stunting) and a 60 percent of adoption rate by households. For health care costs, the number of children under the age of two for each of the 30 years of the analysis is estimated

²⁰ United Nations Children's Fund (UNICEF) and National Economic Research Institute (NERI), 2013. 'The Economic Consequences of Malnutrition in Lao PDR: A Damage Assessment Report'. Preliminary Report' of NERI/UNICEF Consultation, June 3-7, 2013. Vientiane: United Nations Children's Fund.

²¹ The 2017 stunting rate from the Lao Social Indicator Survey II

²² The weighted average, using the stunting rate of 33%, amounts to roughly the national average.

²³ World Bank (2016), "Maternal and Child Health Out-of-Pocket Expenditure and Service Readiness in Lao PDR", World Bank

²⁴ This number was the one used in the UNICEF (2013) Laos study, based on a Lancet literature review.



using crude birth rates and population growth data²⁵. For the increased earnings, children born in year 3 of the project are considered to have increased earnings starting in year 18, when they are 15.

29. Based on these assumptions, the Net Present Value of the benefits of reduced stunting is estimated at LAK 4.1 billion (US\$468,847). While these benefits seem relatively low, they must be interpreted with caution for several reasons. First, the investment is a very long term one and benefits are heavily discounted. These estimates are also built on several assumptions that were more conservative than in the AFN project (for instance, health care savings are only considered for two years and the GDP per person employed is only 50 percent of the national average). Hence, the analysis is to be considered more as a way to conceptualise the project intervention. The nutrition interventions aim to impact different components of the World Bank Human Capital Index, from stunting to survival and expected years of schooling, to increase the country’s future earning potential.

Results of the Economic Analysis

30. The results of the Economic Analysis over a 20-year period, which includes all the activities previously described, including the nutrition benefits, show that the project is very profitable, with an NPV of LAK 297 billion, corresponding to US\$34.3 million, and an Economic Rate of Return of 27.2 percent. These results are very satisfactory, particularly because some of the benefits are not quantified, including the job creation linked to infrastructure maintenance, the time saved preparing meals through the mills and the health benefits of improved cooking stoves through reduced indoor air pollution.

Figure 1.7. Results of the Economic Analysis

Discount rate	6.0%
NPV, LAK	297,242,012,558
NPV, USD	34,335,453
ERR	27.2%

31. A sensitivity analysis confirms that the project would remain profitable in the event of an increase in costs of 10 percent and 25 percent and of a decrease in benefits of 10 percent to 25 percent. The project would also remain profitable if benefits were delayed by one year.

²⁵ Both the Crude Birth Rate and under-5 mortality rates are assumed to be constant, although both would be likely to evolve, but in opposite directions.



Figure 1.8. Sensitivity Analysis

Sensitivity Analysis	NPV, million LAK	NPV, thousands USD	ERR
Base scenario	297,242	34,335	27%
Costs: +10%	267,677	30,920	24%
Costs: +25%	225,377	26,034	20%
Additional revenues: -10%	238,090	27,503	24%
Additional revenues: -25%	151,407	17,490	18%
Benefits delayed by 1 year	242,883	28,056	21%



ANNEX 2: World Bank Country Portfolio Results Chain for an Integrated Approach to Tackling Childhood Stunting²⁶

1. **The proposed convergence approach will support the Government’s National Nutrition Strategy and Plan of Action (NNSPA) to accelerate the reduction of under-5 stunting from 44 percent to an ambitious target of 25 percent by 2025, by enabling the implementation of nutrition-specific and nutrition-sensitive interventions known to reduce stunting in select high-stunting burden provinces.**

The key elements in the causal results chain to the achievement of the stunting target will be to address the immediate, underlying, and some of the basic causes of child undernutrition in Lao PDR (Figure 2.1). At the immediate level, nutritional status will ultimately be determined by the availability of nutrients to the body to meet its requirements and the status of health, while the underlying and basic causes are related to access, availability, and utilization of food; maternal and child caring practices; water and sanitation; and personal hygiene. These determinants are heavily influenced by the social and economic status of women. Achievements in these areas of interventions supported by necessary systems and capacity improvements should result in improved nutrition and reduced illness and disease of pregnant women and children, which, in turn, should result in reduced prevalence of stunting and better physical and cognitive development of children.

2. **The overall goal for the World Bank-financed multisectoral nutrition convergence approach is to showcase that with an integrated approach, in four years, stunting rates could be reduced significantly, by as much as 1.75 percent annually.** The proposed four sectoral operations (Table 2.1) will all contribute to tackling the immediate and underlying causes of malnutrition in provinces with the highest share and absolute numbers of stunted children.²⁷ The selected evidence-based interventions proposed under the convergence approach are expected to reduce stunting rates in the target areas by over 20 percent by 2024, which will correspond to close to 2 percent reduction nationally.

²⁶ In the agriculture sector, synergies will be applied with a donor-financed project (IFAD) on food and nutrition security implemented by MAF in the same geographic areas of intervention.

²⁷ Phongsaly 54 percent, Oudomxay 42.7 percent, Huaphanh 40.7 percent, and Xiengkhuang 46.3 percent (LSIS 2017).

Figure 2.1. Causal Framework to Reducing Stunting in Lao PDR

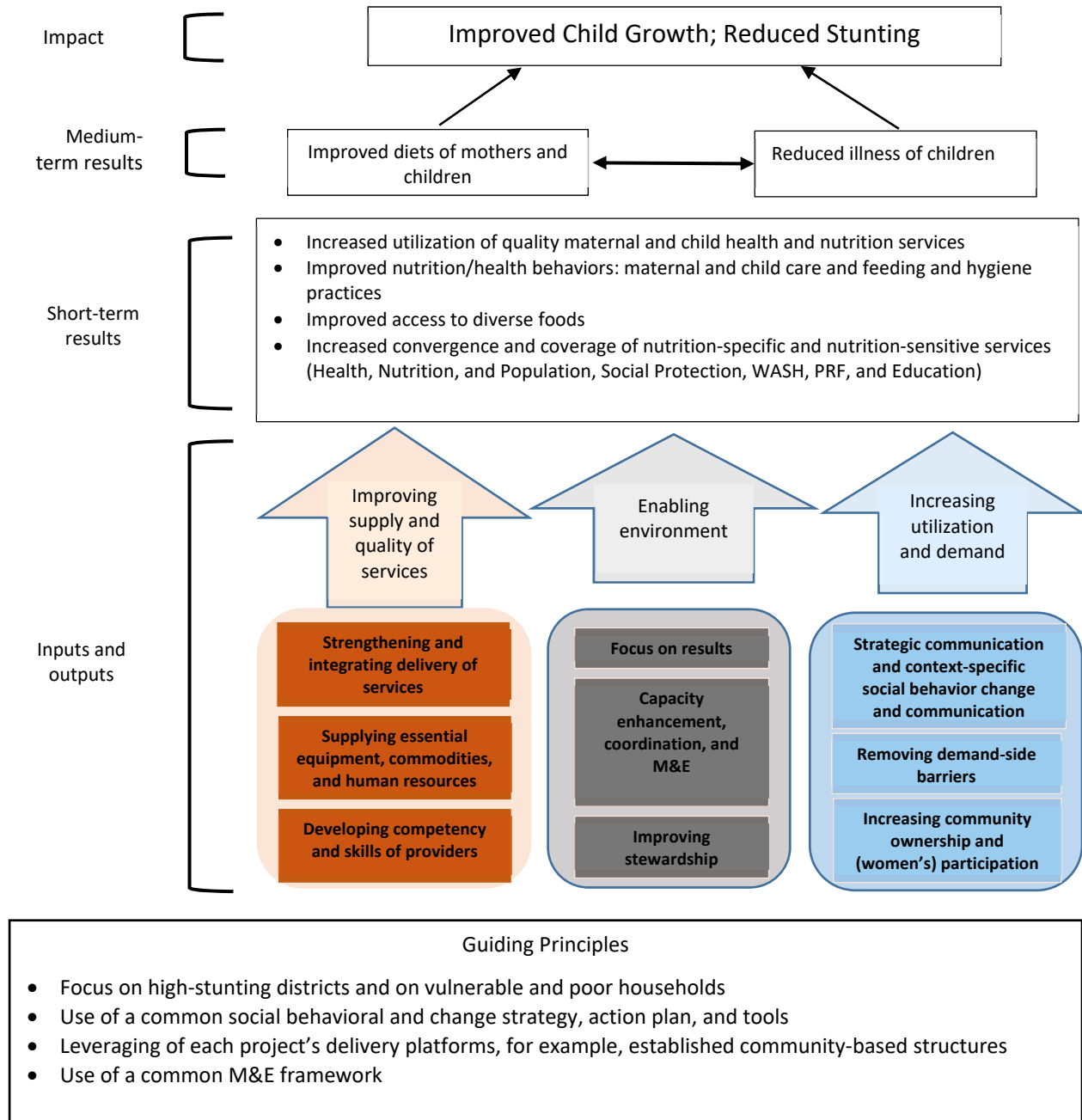




Table 2.1. Country Portfolio Results Chain for an Integrated Approach to Tackling Childhood Stunting in Lao PDR

Country Program Goal	Overall Country Portfolio Objective	Expected Sector-specific Results	Key Indicators	Relevant Project Activities
Reduce stunting prevalence in children under 2 years of age in targeted regions by 20 percent.	To enable the GoL to implement nutrition-specific and nutrition-sensitive interventions by key sectors to address the immediate and underlying determinants of childhood undernutrition in an integrated and coordinated manner	Health and Nutrition Increased supply and utilization of essential maternal and child health and nutrition services	<ul style="list-style-type: none"> • Percentage of children under five years of age whose growth is adequately monitored • Percentage of women who attended at least 4 ANC session during their most recent pregnancy • Percentage of infants 0–5 months who are exclusively breastfed • Percentage of children 6–59 months receiving vitamin A supplementation within the past 12 months 	<ul style="list-style-type: none"> • SBCC for optimal infant and child feeding, maternal nutrition, and hygiene • Improve availability and access to ANC and PNC services • Provision of essential micronutrients to women and children • Treatment of infections (for example, diarrhea and malaria) • Deworming of children and pregnant women



Country Program Goal	Overall Country Portfolio Objective	Expected Sector-specific Results	Key Indicators	Relevant Project Activities
		<p>Social Protection Reduced (nutritional) vulnerability of poor households and increase the demand for and utilization of health and nutrition services and access to diverse diets</p>	<ul style="list-style-type: none"> Percentage of households with periodically updated socio-economic survey information reported in the social registry Number of beneficiaries of social safety net programs Percentage of children 6–23 months from cash transfer beneficiary households consuming foods from four or more recommended food groups Number of villages in project districts where at least three convergence projects have been implemented 	<ul style="list-style-type: none"> Deliver cash transfers and improve SBCC delivery to generate/increase demand for and improve access to essential health and nutrition services Target social protection services/interventions to the poorest and most nutritionally vulnerable population in rural areas SBCC improved in its delivery for optimal infant and child feeding, maternal nutrition, and hygiene and use of cash for nutrition inputs Advocacy and provision of technical support to other ministries on nutrition issues Finance mechanisms to coordinate and monitor nutrition convergence
		<p>WASH Interrupted routes of fecal-oral contamination among infants and young children 0–24 months</p>	<ul style="list-style-type: none"> Number of people provided with access to improved water sources Number of people with access to improved sanitation services Percentage of the target population practicing handwashing with soap after using the latrine Percentage of water supply systems that meet project service levels Number of villages where at least three nutrition convergence projects have been implemented 	<ul style="list-style-type: none"> Construct/rehabilitate water supply systems Support and promote the use of improved sanitation facilities and handwashing stations Construct toilets and handwashing facilities in health centers and schools SBCC to promote handwashing with soap for all household members at critical times, that is, before preparation of food, before feeding of infant/young child, after cleaning of floors, and after use of latrine



Country Program Goal	Overall Country Portfolio Objective	Expected Sector-specific Results	Key Indicators	Relevant Project Activities
		<p>Agriculture/PRF Improve access to basic services, increased production and consumption of diverse and nutritious foods for poor households</p>	<ul style="list-style-type: none"> Percentage of children 6–23 months from SHG and Farmer Nutrition Group households consuming foods from four or more recommended food groups Income from the sale of SHG and Producer Group-financed production Agriculture, livestock and handicraft production by SHG member households Percentage of SHG members with year-round production from home nutrition gardens Percentage of women in leadership positions with SHGs and Village SHG Management Committees (VSMCs) 	<ul style="list-style-type: none"> Seed grant finance and financial management capacity building for investment in agriculture and livestock production for consumption and sale Materials (seeds and basic garden tools), training, monitoring and support on home nutrition gardens Establishment of and support to FNGs comprising mainly pregnant women and women with children under 24 months of age, focusing on SBCC and peer support/learning on growing, processing, cooking and eating diverse and nutritious foods themselves (especially when pregnant) and for their children Investment in infrastructure that will facilitate access to markets for the sale of produce, and access to services (roads and bridges), as well as enhanced production (irrigation, animal shelters and fencing, storage facilities)



Table 2.2. Basic Descriptive Statistics of the nutrition convergence geographic area

Provinces and Districts	Total Population (1)	Number of Female (1)	Number of children under 5 (1)	Number of villages (1)	Number of Households (1)
Phongsaly					
1 Mai	26,145	13,600	4,083	88	4,678
2 Khoua	25,557	13,800	3,443	94	5,293
3 Samphanh	22,981	12,400	3,857	68	4,375
4 Boun Tai	23,402	11,500	3,648	63	4,723
Oudomxay					
5 La	16,506	7,400	2,150	44	3,502
6 Namor	37,322	20,600	5,634	62	6,870
Huaphanh					
7 Houamuong	32,234	15,700	4,759	76	5,292
8 Xam Tai	36,696	18,000	5,210	90	6,022
9 Kouane	24,525	13,600	4,055	66	3,809
10 Xone	15,755	8,000	2,421	34	2,474
Xiengkhuang					
11 Kham	47,256	22,800	6,274	90	8,470
12 Nonghed	37,406	20,800	6,107	106	6,033
Total	345,785	178,200	51,641	881	61,541

Sources of data:

(1) Population and Housing Census 2015



Table 2.3. Basic Descriptive Nutrition Statistics for Both National and Convergence Target Populations

	Lao PDR**(2017)	World Bank Project Convergence Districts*** (2017)				
		Huaphanh	Oudomxay	Phongsaly	Xiengkhuang	All****
Number of districts	148	4	2	4	2	12
Number of villages	8,499	266	106	313	196	881
Number of households*	1,189,233	17,597	10,372	19,069	14,503	61,541
Total Population*	6,277,592	109,210	53,828	98,085	84,662	345,785
Population: 0 – 5 years old*	823,910	16,445	7,784	15,031	12,381	51,641
Population: 0 – 2 years old*	394,058	7,842	3,694	6,886	5,939	24,361
Poverty Rate****	23%	49%	23%	23%	26%	32%
Share of ethnic minority (non-Lao Tai) population*	32%	66%	86%	74%	63%	74%
Stunting	33%	46%	36%	46%	41%	43%
Wasting	9%	6%	6%	6%	4%	21%
Minimum acceptable diet (Breastfed children, 9-23 months)	45%	22%	24%	16%	25%	22%
Not enough food	0					14%
Institutional delivery	65%	41%	55%	26%	52%	42%
Full immunization coverage	48%	38%	32%	27%	39%	35%
Up-to-date Growth monitoring	-	7%	8%	1%	10%	07%
At least 4 ANC Visits	62%	59%	64%	29%	59%	52%
Received PNC after 48 hours	47%	31%	19%	16%	35%	28%
Mothers who can identify at least 1 reason why fruits and vegetables are important for the body		64%	67%	50%	75%	64%
Household sanitation coverage	73%	66%	60%	37%	68%	58%
Households practicing open defecation or using unimproved sanitation	29%	30%	37%	63%	31%	40%
Households with handwashing station/facility		51%	71%	66%	72%	36%
Access to improved water coverage	84%	92	88	82	91	88%

Notes: *Based on Population and Housing Census, 2015, ** Lao Social Indicators Survey (LSIS), 2017; *** KAP Baseline Survey, 2017, **** Poverty Estimates based on small areas estimation technique applied to Population and Housing Census, 2015, **** refers to the 12 districts together as areas of overall nutrition convergence approach.



ANNEX 3: FRAMEWORK FOR A COMMON SBCC AND COMMUNICATION STRATEGY FOR THE NUTRITION CONVERGENCE APPROACH

1. Creating a common vision of planning and implementing a strong and coordinated evidence-based Nutrition Social Behavioral Change and Communication (SBCC) Strategy and Action Plan as outlined in the multi-sector nutrition convergence framework²⁸ would be critical to the success of the overall convergence approach. The proposed SBCC approach is behavior-centered to facilitate individuals, households, groups, and communities in adopting and sustaining nutrition related practices. It complements the National Social and Behavior Change Multi-Sectoral Communication Strategy for Nutrition by designing an approach for four World Bank supported operations: Health Governance and Nutrition Development Project (HGNDP) (P151425)/ Health and Nutrition Services Access (HANSA) (P16616), Reducing Rural Poverty and Malnutrition Project (P162565), Water and Sanitation Project (P164901), and the Poverty Reduction Fund III AF (P168620).

Convergence for an effective delivery of SBCC will be achieved in the following manner:

2. **Thematic convergence:** The thematic convergence builds on the United Nations Children’s Fund’s (UNICEF) seminal framework to address the underlying, basic, and immediate causes of malnutrition, all of which are behavior related (Figure 3.1). All projects are designed to include nutrition-specific and nutrition- sensitive interventions to improve: i) care and feeding practices, ii) household food security, and iii) household environment and health services. The related SBCC interventions will be carried out in a coordinated and phased manner.

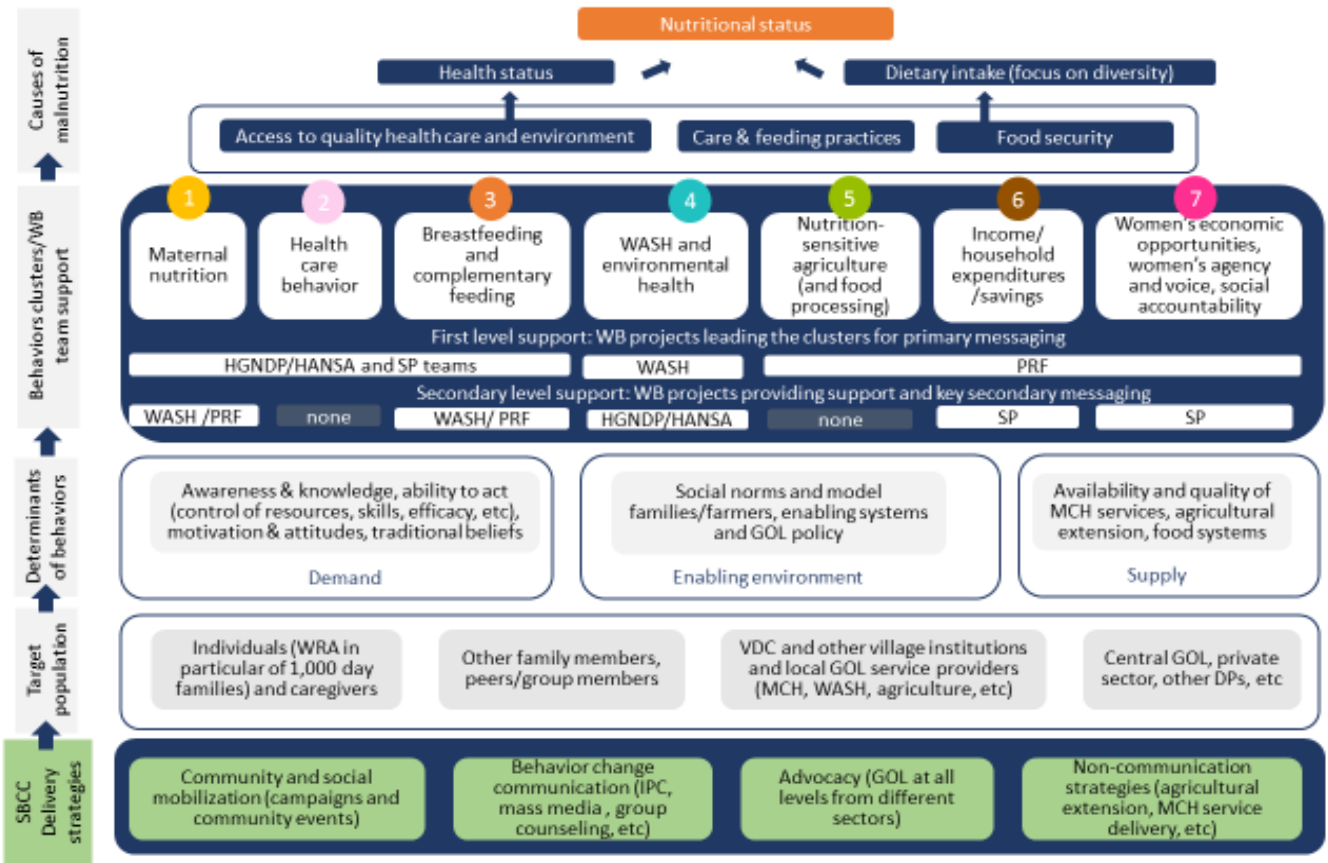
Communications convergence through coordinated SBCC planning and implementation:

3. **Identification of messages** based on sector (and which is therefore nutrition-specific or nutrition-sensitive) but linked to over-arching behaviors that contribute to the nutrition agenda in Lao PDR. Figure 3.1 provides key practices per sector which can be grouped into seven clusters. These clusters are: i) maternal nutrition, ii) health care seeking behavior, iii) breastfeeding and complementary feeding practices, iv) WASH and environmental health, v) nutrition sensitive agriculture practices (including food processing), vi) income/household expenditures/savings, and vii) women empowerment. The evidence supporting the positive relationship between each practice and nutritional status has been documented in other documents of the WB convergence approach. It is important to note that the practices presented in Figure 4 are not exhaustive, there are many sub-practices which can be added at a later stage.

4. **Complementary messaging** by the various projects: using primary messaging from one’s own sector/ to meet specific project and sector goals, supplemented by secondary/support messaging from other projects/sectors. These complementary messages feed into the same behavior change. Using this method serves to provide the beneficiary with many more reasons to change their behavior/adopt the new behavior, and also reiterates the message from a new angle (avoids communication fatigue, which is a result of straightforward repetition).

²⁸ World Bank’s Multi-Sector Nutrition Engagement Framework for Lao PDR

Figure 3.1 Framework for SBCC delivery pathways for improved behaviors and nutritional status



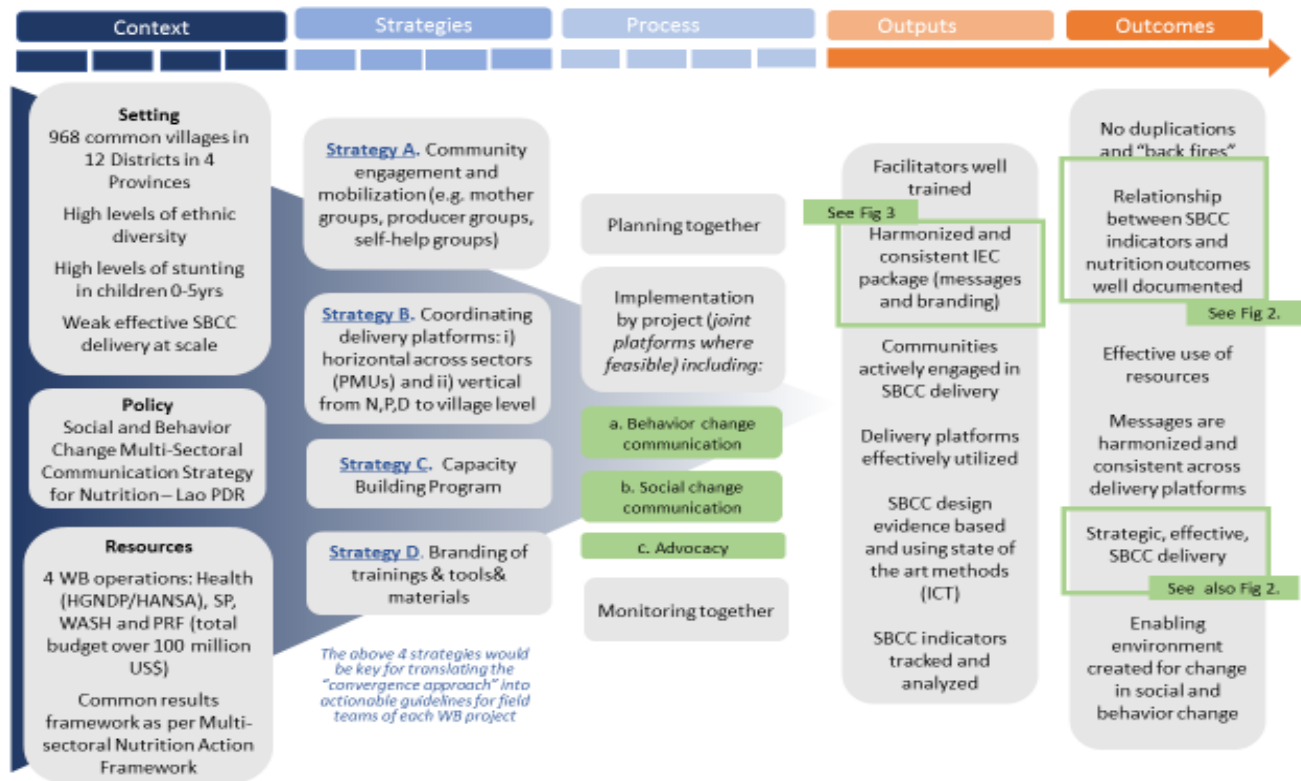
5. **Communication will be coordinated to focus on the behaviors of those who need to practice the desired behaviors**, e.g. mothers and other caregivers but also those who can influence decisions. The SBCC framework identified four types of audiences (Figure 3.1): The primary audience includes women in reproductive age (women aged 15-49 years), in particular those pregnant and with children under two years) and other caregivers. The secondary audience includes other family members, peers/group members, this will include those producing food (farmers). As tertiary audience, a focus is on community leaders (e.g. Village Development Committee) who can mobilize or allocate resources as well as local GoL service providers (including WASH and agricultural service provision). As final target group, Central GOL, private sector, and other development partners will be targeted.

6. **Same or similar delivery platforms from national to community level** (Figure 3.2): Develop and improve communication for better coordination between the PMUs of different projects, and the line ministries at the national, provincial, and in particular, at the district and village level. This can be done by using an existing committee, and inviting convergence project personnel to its meetings, by using a common planner at the village level to earmark main meetings, by coordinating HH-level visits etc. At the village-level, a concerted effort should be made to coordinate village groups, in particular with view on sustainability.²⁹

²⁹ Example: PRF's proposed FNGs can be a good forum for WASH to promote safe water practices or the building of household level



Figure 4 Framework for Common Nutrition Social Behavior change communications Strategy



- By coordinating village-level SBCC action plans, and to the extent possible, having all projects working within an agreed time-frame to deliver the various SBCC interventions to the same households in any particular village³⁰.
- By jointly carrying out certain activities with other projects or combine project activities in one event at the village level, thereby increasing visibility for all projects, and helping reinforce the impact of SBCC. Example: Health, SP, WASH and PRF could join to do village cleaning, or host a PRF village planning meeting.
- Create common branding (including logo and legend) for the multi-sector Nutrition agenda, and use it at national level (e.g. for the National Sanitation Campaign planned under the WSS project) and at village-level (to increase interest and recall).
- Use similar, standardized and easy-to-use communication tools and channels at the village level. Different projects could use the same communication styles across projects, for example images that are similar in how they look and are used. Short audio-visual products could be used to deliver complementary

handwashing stations. The on-going HGNDP already supports the implementation at the community level of the national nutrition SBCC plan in the form of community edutainment events, community discussion groups, peer groups, or one-on-one exchanges and are often targeted at specific sub-populations (such as pregnant women, women with children under a certain age, men, adolescents, etc.) and community-led total sanitation (CLTS) in the 12 selected districts (10 of these districts overlap with the PRF districts). Starting in 2019, the Water and Sanitation for Health Project will expand these efforts in the 12 districts. In the villages which don't have a WASH project, CLTS can be carried out by the other projects such as HGNDP, HANSA or PRF.

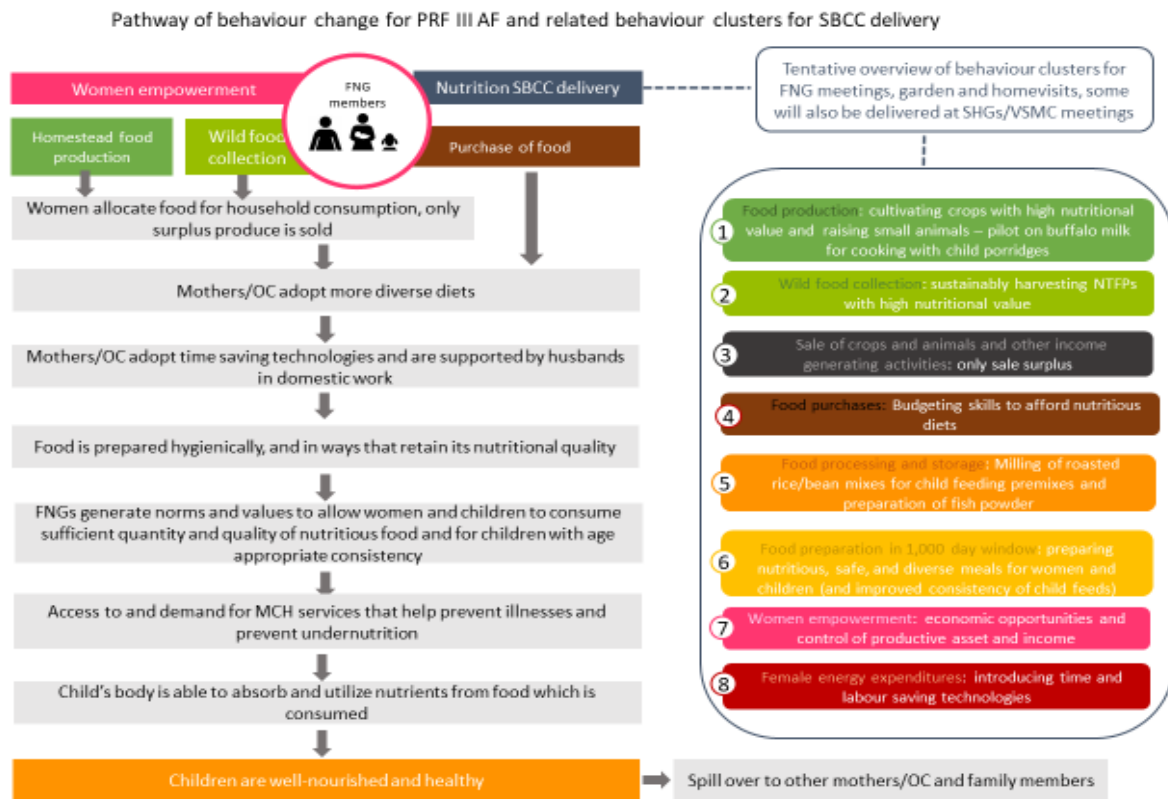
³⁰ The cycle should be no longer than 2 years to deliver all the messages.

messaging, which could be shown at meetings of any project, and would still be relevant.

11. Joint training and orientation of project staff at various levels would increase synergy and strengthen institutional links between program management units and line ministries.

12. The PRF III AF interventions will advance a specific set of messages as part of the overall SBCC framework, as summarized in Figure 3.3.

Figure 3.3 Framework for Social Behavior change under PRF III AF



Overall communication strategy for the WB financed nutrition convergence approach

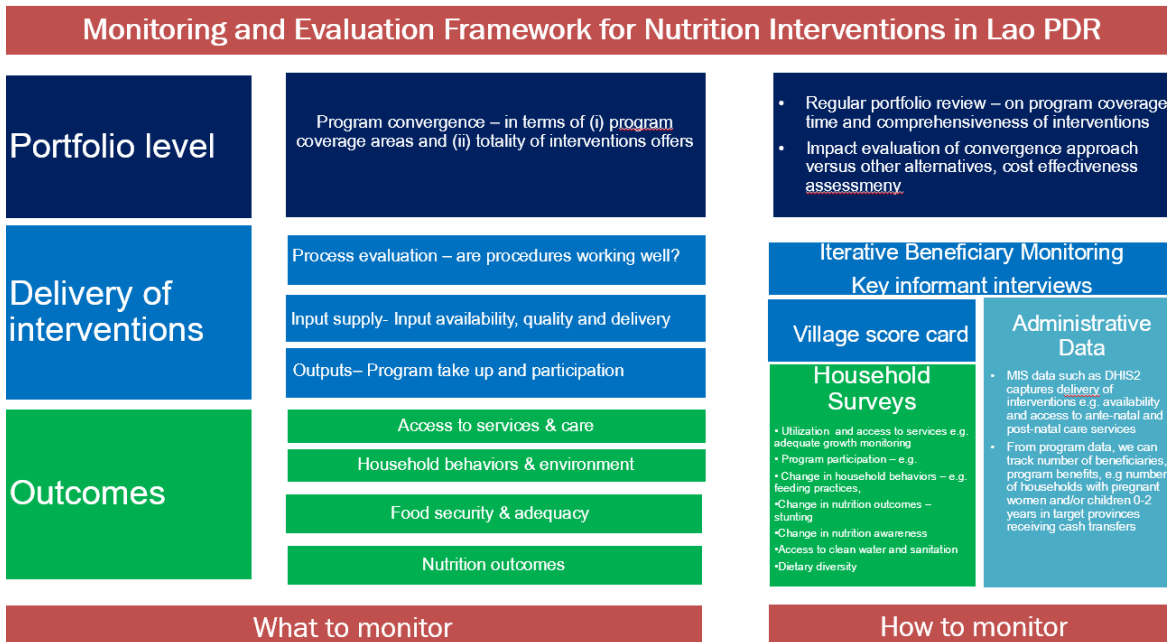
13. All projects must align with the overall communication of the multi-sector nutrition convergence approach. National-level advocacy for the World Bank’s multi-sector approach will need to be fully coordinated to reach the government and stakeholders. This can be achieved through workshops and publications, such as briefs, as well as sharing key learning via common social media platforms and discussion groups with development partners.



ANNEX 4: MONITORING AND EVALUATION FRAMEWORK FOR THE NUTRITION CONVERGENCE APPROACH

1. The World Bank will closely monitor the implementation of this multispectral nutrition convergence approach. A comprehensive monitoring and evaluation framework will be established specifically to (i) track the convergence of the World Bank’s portfolio of nutrition interventions at the village level, (ii) report on nutrition indicators, and (iii) quantify the impact of the convergence approach, its cost effectiveness and effectiveness of individual interventions that are associated to individual projects. This will be achieved by tracking the delivery of interventions at the village level, process monitoring, measuring household and individual level outcomes and imbedding impact evaluations in the projects to measure attributable impacts of the portfolio interventions. An overall summary of the M&E framework is provided in Figure 4.1 below.

Figure 5.1 Overview of the M&E framework



2. Monitoring activities shall focus on monitoring the delivery of interventions to assess the achievement of convergence and tracking progress on utilization of nutrition specific and nutrition sensitive services, and nutrition outcomes. Thus, the monitoring system shall track input and output delivery and nutrition outcomes committed in the list of the convergence result indicators and related intervention activities. The evaluation framework is set-up to measure impact at the portfolio level and the project level. The portfolio level evaluation assesses the effectiveness of the convergence approach on nutrition outcomes while the project level evaluation assesses the impact of specific interventions on achievement of intermediate outcomes, as well as process or delivery mechanism evaluation.

Monitoring of Outcomes

3. The monitoring framework will be designed to regularly report on progress on improving nutrition behaviors and outcomes at the individual and household level in program areas. Some of the outcome indicators will be obtained from administrative data sources, especially the projects’ MIS, but the majority



shall be monitored using Harmonized Household Surveys (see Table 4.1). The harmonized household surveys will include a standardized set of questions in separate modules, to measure the key indicators for the convergence result indicators and project specific indicators, depending on the final implementation arrangements. The definitions and measurement methodology for each of those indicators will be based on the project specific guidelines for such measures, with teams from each of the four projects taking leadership in the design of the modules of their respective projects. The convergence monitoring and evaluation team will take overall responsibility on the survey design and field implementation plans.

Table 4.1 Monitoring plan for convergence results indicators

Indicator Name (disaggregated by gender, ethnicity & welfare status)	Data Source	Frequency	Start Year	End Year
Under 2 years old stunting rate,	Harmonized household survey	3 times	2019	2024
Percentage of children under two years old whose growth is adequately monitored	Harmonized household survey	3 times	2019	2024
Percentage of pregnant women with at least 4 ANC during pregnancy	Harmonized household survey	3 times	2019	2024
Percentage of infants 0-5 months who are exclusively breastfed	Harmonized household survey	3 times	2019	2024
Percentage of children 6-59 more receiving vitamin A supplementation within the past 12 months	Harmonized household survey	3 times	2019	2024
Number of households with pregnant women and/or children 0-2 years in target provinces receiving cash transfers	SP Project MIS	Annually	2020	2024
Percentage of project beneficiaries who participate in community nutrition sessions at least once per month	SP Project MIS	Annually	2020	2024
Percentage of children aged 6-23 months of age consuming foods from four or more recommended food groups	Harmonized household survey	3 times	2019	2024
Percentage of households with access to improved sanitation	Harmonized household survey	3 times	2019	2024
Percentage of households with access to clean water	Harmonized household survey	3 times	2019	2024
Proportion of households with soap at handwashing stations	Harmonized household survey	3 times	2019	2024
Proportion of households that use proper disposal techniques for child and animal feces	Harmonized household survey	3 times	2019	2024
Percentage of households with a mean household dietary diversity score > 4	Harmonized household survey	3 times	2019	2024
Percentage of pregnant women and mothers of children under two years old in targeted communities participating in Farmer Nutrition	PRF MIS	Annually	2019	2024



Indicator Name (disaggregated by gender, ethnicity & welfare status)	Data Source	Frequency	Start Year	End Year
Groups and Self- Help Groups (SHGs)				
Percentage increase of income (or overall consumption) of SHG members	Harmonized household survey	3 times	2019	2024
Percentage of SHG member food production which is consumed by members (agriculture, livestock, fisheries and aquaculture)	PRF Project MIS data	Annually	2021	2024
Percentage increase in the availability of nutritious foods	Harmonized household survey	3 times	2019	2024
Percentage increase in the consumption of nutritious foods	Harmonized household survey	3 times	2019	2024
Percentage of time saved and reduced workload for women (including pregnant and breastfeeding)	Harmonized household survey	3 times	2019	2024

4. At least three surveys would be needed, corresponding to the baseline, mid-line and end line of the program implementation. The exact timing of these surveys will factor the roll-out process of the four projects to maximize synergies. The surveys ought to be representative of all the 12 program districts and include both household and village level questionnaires. Thus, the surveys would ideally have a sample size of around 2,500 – 3,000 households.

5. A World Bank executed survey program, implemented in partnership with MPI, would be ideal for effective monitoring of the convergence of interventions and tracking outcomes at the portfolio level. However, that requires mobilizing World Bank and TF resources which cannot be guaranteed. The second-best alternative, that requires overcoming significant coordination bottlenecks and buy-in across sectors, is to incorporate the harmonized surveys in each of the planned projects to share the costs of data collection. For instance, a midline KAP survey next year could be used at the baseline for all projects by incorporating the necessary modules to capture convergence indicators drawn from the Health and Nutrition Services Access project, Reducing Rural Poverty and Malnutrition project, Water Supply and Sanitation project and PRF III AF project. The next harmonized survey could then be implemented under the Reducing Rural Poverty and Malnutrition project at the time of the cash roll out. The final survey could be covered from the WASH project or PRF project in the final years of the project. Coordinating timelines, getting implementing agencies to agree to a harmonized survey capturing indicators, and at times villages, beyond the scope of their projects, as well as timely sharing data across agencies are significant challenges with this approach. Not to mention the fragmented responsibilities for data collection that such an approach would entail.

Monitoring delivery of interventions

6. Monitoring delivery of interventions will focus on tracking the achievement of convergence activities at the village level. This establishes a system for tracking the provision of inputs and outputs produced at village level, assessing the adequacy of delivery mechanisms and the program take up and utilization of delivered services. The main goal would be to assess and provide regular feedback on the achievement of convergence activities in terms of totality of delivery of key interventions at the village level, the number of villages, and to the extent possible the number of households, where convergence



has been achieved and the duration of that coverage between 2019 and 2024, during which the four projects will be implemented. Four main tools will be used for this purpose:

- Village score cards
- Iterative Beneficiary Monitoring (IBM)
- Administrative data – Sector and program MIS
- Spot Checks and Key Informant Interviews

7. Village score cards shall be employed as a tool for regular reporting on interventions being delivered in each of the villages in the 12 districts covered by at least one of the four planned projects, providing a village level mapping of ongoing interventions. A bottom-up approach will be employed to collect data using village score cards, taking advantage of existing implementing arrangements of current and planned projects by the World Bank and other agencies that already use village facilitators to coordinate and deliver some interventions at the village level. Among the World Bank’s own portfolio, both the Health Governance Nutrition Development Project (HGNDP) and the ECE project have village facilitators which provides a pool of potential data collectors for the village score card. The PRF also has Kum Ban Facilitators and Village Self-Help Group Management Committees (VSMCs) to potentially draw upon. The score card will focus on a few input indicators (see Table 4.2) selected from a list of overlapping indicators in the convergence results indicators framework and the national nutrition surveillance system that MoH is currently developing with technical assistance from UNICEF and WFP. The World Bank plans to collaborate with the WFP to develop a simple, mobile based tool, acquire the appropriate mobile devices, train and assign one of the village facilitators in each village to periodically report on ongoing nutrition sensitive programs at the village level, so that data could be captured locally and uploaded into a centralized database.

8. This concept offers some great advantages. Beyond initial development, equipment and training expenses, the running costs are very low, requiring only token expenses for data airtime credit and top-up incentives. The village facilitators are already sensitized on nutrition interventions given their various roles in SBCC and other functions they perform in their communities, for which they may receive payment under current projects. The M&E budget could be used to provide incremental allowances for performing the data collection at a lesser cost than hiring professional enumerators. Reporting can be more frequent, since the village facilitators reside in villages they work in, unlike when a survey firm is hired to undertake initial data collection. The downside is that village facilitators are not trained enumerators. But the simplicity of the tool, combined with some training, validation and incentives for good performance can mitigate this. Setting up the system and collecting the data is envisaged to take about 6 months, after which data can be collected on a semi-annual basis. This involves the following processes:

- Design of tools in consultation with the government, especially the National Nutrition Committee,
- Software application development (both the field mobile based application that village facilitators will use for recording data in the field and the end user web based interface, for receiving, processing and reporting the data) and repository set
- Training of selected staff at the province and district level on collecting data using the mobile application and on how to supervise and validate this data so they can later be field trainers and supervisors.
- Pretesting to validate the quality of data collected, assess the limits and scope for expansion of



the application and review the application’s performance under different conditions, among them the mobile network variability and digital illiteracy.

- Training of village facilitators on using the data collection tool, and implementation of data quality control mechanisms

9. Iterative Beneficiary Monitoring (IBM) shall be employed to obtain continuous feedback from program beneficiaries about challenges and adequacy of delivery mechanisms for the interventions. IBM is done using quick, small and targeted surveys that track a narrow set of indicators and can be implemented in a 3-week time period at a cost of between US\$ 3,000 – 5,000. A different set of indicators could be tracked in each survey. This allows for continuous monitoring of delivery of interventions at the household level, and for improved utilization of services. It will also be used for process monitoring by including targeted questions on either satisfaction with implementation arrangements or whether processes are being followed. It will be used to quickly assess challenges in program take up too. Two such surveys are envisaged every fiscal year, from the time of effectiveness of the first of the four projects under preparation, which mostly could be run with a local team of Lao consultants or partner institutions.

10. Administrative data shall also be used for monitoring program outputs, supply of some inputs and program take up. This includes both the sector wide and project specific administrative data and MIS systems. PRF already has an MIS for tracking various inputs and outputs (i.e. SHG and Mother and Children Nutrition Group members and their activities), and this will be enhanced through the additional financing to cover a wider geographic area and new interventions. Both the Water and Sanitation project and Reducing Rural Poverty and Malnutrition project will build MIS systems that could be used to monitor key outcomes such as number of households receiving benefits, and number of hand-washing stations/facilities constructed. Meanwhile delivery of most interventions in the health sector would be captured from the Health and Nutrition Services Access (HANSA) project results framework, HANSA DLIs and from DHIS2 data. This could be complemented with information obtained from key informant interviews at district and village level.

11. Table 4.2 provides a summary of the interventions from the portfolio result chain that will be monitored, their data sources, timeframe and frequency of monitoring. Delivery of most interventions can be monitored on a semi-annual basis according to this monitoring plan. Thus, a semi-annual convergence monitoring report will be produced to report and update management and the government principals on progress towards achieving convergence outcomes. This will report on the number of villages where convergence outcomes resulting from portfolio interventions have been achieved, and highlight any implementation challenges discovered.

Table 4.2: Monitoring plan for delivery of interventions at portfolio level

Intervention	Data Sources				Period		Frequency
	Village Score Card	Iterative Beneficiary Monitoring	Admin Data	Key informant Interviews	Start Year	End Year	
SBCC for optimal infant and child feeding, maternal nutrition and use of cash for nutrition inputs	✓	✓			2018	2024	Semi-annual
SBCC to promote of hand-washing with soap for all household members	✓	✓			2019	2024	Semi-annual



Intervention	Data Sources				Period		Frequency
	Village Score Card	Iterative Beneficiary Monitoring	Admin Data	Key informant Interviews	Start Year	End Year	
at critical times							
SBCC to increase production and consumption of diverse foods	✓	✓			2019	2024	Semi-annual
Improve availability and access to ante-natal and post-natal care services		✓	DHIS2		2018	2024	Semi-annual
Provision of essential micronutrients to women and children	✓		DHIS2		2018	2024	Semi-annual
Treatment of infections (e.g. diarrhea, malaria)			DHIS2		2018	2024	Semi-annual
Deworming of children and pregnant women	✓				2018	2024	Semi-annual
Deliver cash transfers to generate/increase demand for and improve access to essential health and nutrition services	✓				2020	2024	Semi-annual
Target SP services/interventions to the poorest and most nutritionally vulnerable population in rural areas		✓	SP Project MIS		2020	2024	Semi-annual
Advocacy and provision of technical support to other Ministries on nutrition issues				✓	2019	2024	Annually
Support and promote villages to achieve 100% use of improved sanitation facilities		✓	WASH Project CLT data		2019	2024	Semi-annual
Provision/construction of hand-washing stations/ facilities	✓				2019	2024	Semi-annual
Promote use of household level treatment of water before use, e.g chlorination, boiling etc	✓				2019	2024	Semi-annual
Disseminate nutrition information to communities/households through the agricultural extension and other outreach systems		✓			2020	2024	Semi-annual
Provide financing, facilitation support and technical assistance for income-generating activities including the production and sale of small livestock (for example, poultry and fish) and vegetables	✓	✓			2020	2024	Semi-annual
Incentivize regular group food		✓			2020	2024	Semi-annual



Intervention	Data Sources				Period		Frequency
	Village Score Card	Iterative Beneficiary Monitoring	Admin Data	Key informant Interviews	Start Year	End Year	
processing, cooking and eating among pregnant women, mothers and infants							
Provide seeds, technical assistance and SBCC to increase production and consumption of nutritious and diverse foods	✓	✓			2020	2024	Semi-annual
Finance construction and rehabilitation of livelihood-oriented infrastructure to improve access to markets and services	✓				2020	2024	

Evaluation of convergence approach

12. Project design practicalities will necessarily result in variations in the number and type of interventions received at the village level as the four projects roll out. This provides opportunities to embed an experimental evaluation design of the convergence approach to assess the impact of WB interventions as a collective, the cost effectiveness of the convergence approach and identify the combination of interventions with the greatest impact on nutrition outcomes given their cost.

13. Two main features of the program implementation result in this varying intensity of convergence. First, is the varying geographical coverage of the four projects. The Health and Nutrition Services Access Project and the Reducing Rural Poverty and Malnutrition project, will cover all villages in the 12 Districts. On the other hand, the PRF III AF will cover 481 of the overlapping villages, while the Water Supply and Sanitation Project will likely cover 400 villages, depending upon community demand. Thus, only 400 of the 881 villages will receive all interventions at full implementation of all the four projects. Additionally, the roll-out pace differs across programs either because some interventions can be prepared and implemented much quicker than others or due to phased rolled out of interventions within projects. For example, setting up the payment system might take up to 18 months, while SBCC is anticipated to be implemented much earlier. When the cash transfer is rolled out, it is anticipated to cover only half of the eligible beneficiaries at the beginning. Careful planning and coordination of this roll out process (e.g. randomizing phase in) permits embedding an evaluation of the impact and cost effectiveness of the convergence approach feasible

Project level evaluations

14. Such evaluation will focus on evaluating the impact of specific interventions on achievement of intermediate outcome indicators and the effectiveness of different delivery mechanisms. This will be done using three approaches depending on the context.

- Experimental designs can be built in by exploiting any phased approach to implementation within projects. In this case, phased implementation can be carefully planned to accommodate an impact evaluation, but randomizing selection of villages in each phase for example.
- Quasi-experimental designs that exploit arbitrary discontinuities introduced by program eligibility



criteria. For example, age based cut off points for eligibility of cash transfer in the first phase of the Reducing Rural Poverty and Malnutrition project make it possible to use regression discontinuity analysis to evaluate the impact of the interventions for people around the cut-off point. Similarly, using PMT thresholds for eligibility for subsidies for construction of sanitary facilities under the Water Supply and Sanitation Project also makes use of regression discontinuity applicable for evaluation impact of interventions.

- Nimble experiments - Small experiments can also be run without significantly changing the nature of program implementation and still answer questions on the how to best implement key interventions. For example, by taking advantage of changes to existing interventions like SBCC, which is already being done, the impact of a new module can be assessed compared to current practice by making small changes to the operation procedures across locations e.g. how, who delivers an intervention.

Coordinating mechanisms

15. Strong coordination across projects and implementing agencies is crucial for successful implementation of the monitoring and evaluation framework. Experimental approaches require coordinated roll-out of project implementation across projects. The four project teams will therefore develop a geographic, intervention & time specific roll out plan, keeping in mind that total convergence should be achieved within a given time frame of the project. Regular convergence workshops with the government would also be crucial for instilling a shared vision for the monitoring and evaluation of convergence of nutrition interventions.