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Lao Poverty Reduction Fund Phase II Impact Evaluation: Baseline Report

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Executive Summary

Introduction and Methods

The Lao PDR has achieved significant progress in poverty reduction and access to services since the initiation of market-oriented economic reforms in the mid 1980's as the incidence of poverty has declined steadily over the last 15 years, from 46% in 1993 to 28% in 2008. However, the Lao PDR remains one of the poorest countries in the region with an estimated per capita income of US$740 in 2008.,. Considerable differences in poverty rates persist among different geographic areas and ethnic groups with all three major non-Lao-Tai groups, who constitute about 65% of the population, still recording poverty rates above 42%, compared to 25% among Lao-Tai (considered the majority group). The north of the country continues to lag behind other regions, and had a poverty head county of 32.5% in 2007/8 compared to 22.8% and 29.8% respectively in the South and Central regions.[1] Non-income poverty also remains a serious issue and the country faces multiple challenges in meeting the Millennium Development Goals (MDGs) targets including those related to nutrition, measles immunization, skilled birth attendance and some dimensions of gender equality.

The Government of Lao PDR (GoL) has prioritized and articulated its poverty reduction strategy in its 2004 National Growth and Poverty Reduction Strategy (NGPES – the PRSP). The next phase of the Poverty Reduction Fund (PRF) Project will continue to contribute to the Government's poverty reduction agenda. Phase II of PRF focuses on reducing poverty in relatively remote and inaccessible areas through financing investments in small infrastructure that facilitate poor communities' access to basic services and markets and well as contributing to strengthening citizens' engagement and voice in local development. PRF I, implemented from 2002-2011, had a successful track record in delivering services in remote areas quickly and at scale. To date, PRF I provided support to approximately 2,185 communities in 8 out of 17 provinces, 30 out of 144 districts, including 23 priority poverty districts (out of 45). Since its establishment in 2002, 3,396 subprojects have been completed in around 2,000 villages.

As a component to the second phase, the Government has recognized the need to implement a rigorous evaluation approach which will be able to attribute impacts on key outcome indicators to the project and determine how and why these impacts are occurring. This report presents the results of the baseline survey, the first of two surveys over the four year period of evaluation conducted on behalf of the government with the assistance of the donor community. The survey and qualitative studies were implemented by a local research firm, Indochina Research Ltd, with

[1] Socio-Economic and Poverty Atlas of the Lao PDR (2008) Swiss National Centre of Competence in Research (NCCR) North-South and Geographica Bernensia.

technical support and oversight by the World Bank, The study was co-funded through a multi-donor trust fund supported by the governments of Switzerland and Australia.

The baseline's function is to demonstrate the success of the methodology in determining attributable impacts as well as provide a snapshot of initial conditions before project implementation began. In conjunction with the planned follow up survey in late 2016, it will allow the government to implement a rigorous impact evaluation, to assess the effectiveness of PRF Phase II and inform the design of a possible Phase III or other future interventions. The baseline survey was composed of two components: a quantitative study using a randomized approach which interviewed 4,393 households and 25,125 respondents across 274 villages in eleven districts in four provinces of Phongsaly, Oudomxai, Luang Prabang, and Attapeu, and a qualitative component including 574 respondents across 16 villages. The primary research questions for the evaluation were developed in coordination with the Government:

1. What is the impact of PRF on **poverty reduction**
2. Does PRF **improve utilization/access** to basic services (education, health, water, roads)?
3. Does PRF **increase villagers' awareness and participation** in development?
4. Does PRF **increase social capital**?
5. **Who benefits** from PRF?
    a. Poorest
    b. Women
    c. Ethnic minorities
    d. Persons with disabilities
6. Are government officials and villagers **satisfied** with PRF?

A pre-analysis plan was completed and filed on January 7th, 2013.

Key Findings

The baseline findings demonstrate that the randomized assignment of kumbanh into treatment and control groups has been successful. Balance tests confirmed that there are no pre-project differences in key outcome indicators or household and village characteristics, aside from four indicators related to cost of transport to markets and health clinics, secondary enrollment rate and rate of community members contributing materials or resources to development projects. While subsequent analysis will attempt to control for these differences, it is expected that given the large number of indicators, significant differences would emerge by pure chance in a few cases.

The overall profile of economic activity and opportunities across households is relatively uniform. 92% of all households are farmers, including 94% of all poor households with only 22% of households able to sell products beyond what they consume, and of these only 8% sell products outside the village (or 2% of the entire sample). Consumption patterns reflect this with no statistically significantly differences across regions or sub-groups, aside from non-farmers and Lao ethnic minority households which demonstrate higher consumption levels.

Infrastructure constraints are primary factors in determining access to markets. 15% of the villages had no access to a road. For villages with access to a road the rate of access in the rainy season is only 30% across all four provinces. Rates of access to public transport are also low at only 17% of all villages ensuring that villagers must secure private transport. Villagers must travel on average 3 hours and approximately 23,000 kip each way to access district markets. Lack of transport, time and cost of travel were cited 81% of the time as the reasons for villagers not selling products outside the village.

The benefits of accessing district markets could be substantial. Prices average 65% higher than prices obtained in the village. The current practice is to sell to traders who offer significantly lower prices, potentially dampening the incentive to produce at more than a subsistence level.

Utilization rates for health and education services are heavily dependent upon the location of the facility suggesting that infrastructure constraints are a key driver of service utilization. Primary schools are located in 95% of all villages with consequent enrollment rates of 90%. Lower secondary schools are present in just 12.4% of villages with an overall enrollment rate of 71%. However, enrollment jumps to 86% in villages which contain a lower secondary school. Similarly, with respect to access to health care, only 37% of individuals who are sick seek care in a modern health facility. For the 12% of villages which contain a facility, this rate rises to 56%. Average time and cost to reach health facilities average 72 minutes and approximately 20,000 kip each way.

Access to Clean Water is highly dependent on collected rain water. The percentage of households with access to clean water from pipes or protected wells is only 5% in comparison with 76% if rain water collection is included. This is a real constraint in areas of the country where rainfall is not consistent.

Participation in the formal village government system is strong but the quality of participation in lacking. Attendance rates at village meetings are extremely high with over 95% of households having one member present. However, actions in meeting tend to be limited to observing with only 34% of households speaking at meetings. Effective participation is a more significant problem among the poor (27.6%), some minority groups (particularly Hmong at 25%) and women (29.2%)with language and education as primary constraints. Access to information on use of funds and planning is relatively low at less than 26% of households.

Villages have a well-developed system for accountability with a set of formal channels to identify needs, provide services and implement projects, and resolve conflict. Over 85% of households view government as active in seeking input from the community and 60% are satisfied with its capacity to solve problems. Over 45% of households believe that the community has significant influence in village affairs.

However, when regular channels are not effective, other means to ensure accountability are limited, including collective action. Only 8% of households reported petitioning the government collectively over the past 12 months while 44% of household indicated that the community could reverse decisions taken by the village head that it disagreed with.

Disability Rates for any particular category are low; however, rates for individuals reporting having any of the six disabilities was at 10.2%. Overall rates of disability are relative low (reported in Table 13). For the whole sample, rates of disability for seeing (6.3%), hearing (4.1%), concentrating (3.1%) and walking (3.6%) were relatively higher in comparison with washing (2.5%) and communicating in native language (1.6%). Despite low numbers for any particular category, when considering the % of individuals reporting a disability from any of the six categories, the overall rate is 10.2%. There were no statistically significant differences based on gender or poverty status for any particular disability category or for having any disability. However, there is some variation across provinces. Households in Phongsali reported disability at rates significantly lower on average: less than half the total rate across all six categories. Rates of disability were similarly low at less than half the average in Luang Prabang as well, but only for washing and communicating.

The results highlight some considerations going forward for PRF and the planned evaluation:

1. **Ensure alternatives to traditional infrastructure projects are feasible.** While standard infrastructure projects seeking to alleviate constraints are likely to be effective, if there are implementation problems such as difficulty staffing schools or health clinics in villages, solutions such as funds for boarding of secondary students or travel of sick community members to kumbanh or districts centers should be considered as alternatives.
2. **Focus on the inclusion of previously excluded groups in decision-making.** Capacity-building and facilitation should focus on the inclusion of disadvantaged groups, particularly women and non- or limited-Lao speaking households. Developing ways around problems with language and existing education levels are likely to be important.
3. **Encourage use of new infrastructure to increase economic opportunities.** Given that the vast majority of households in the survey do

not sell products outside the village and that prices are typically double that received via sales in the village, the project should focus on assisting farmers in maximizing the benefits of removing infrastructure constraints by managing production and planning to take advantage of new opportunities which become available, including getting goods to district markets and potentially crop selection.

1 Introduction

The Lao PDR has achieved significant progress in poverty reduction and access to services since the initiation of market-oriented economic reforms in the mid 1980's as the incidence of poverty has declined steadily over the last 15 years, from 46% in 1993 to 28% in 2008. Over the same period about one-third of the population has gained access to improved health, education, electricity, water and sanitation services. However, the Lao PDR remains one of the poorest countries in the region with an estimated per capita income of US$740 in 2008, and is still classified by the United Nations as a Least Developed Country.

Considerable differences in poverty rates persist among different geographic areas and ethnic groups with all three major non-Lao-Tai groups, who constitute about 65% of the population, still recording poverty rates above 42%, compared to 25% among Lao-Tai (considered the majority group). The pattern of poverty also depends on geography and regional location: for urban areas the incidence of poverty is 17% compared to almost double the rate– 32% – in rural areas. Thus, although rural areas make up 71% of the population, they account for 82% of the poor. The north of the country continues to lag behind other regions, and had a poverty head county of 32% in 2007/8 compared to 23% and 30% respectively in the South and Central regions.[2] Non-income poverty also remains a serious issue and the country faces multiple challenges in meeting the Millennium Development Goals (MDGs) targets including those related to nutrition, measles immunization, skilled birth attendance and some dimensions of gender equality. As with poverty, social indicators are worse in remote areas and among the non-Lao Tai ethnic groups.

The Government of Lao PDR (GoL) has prioritized and articulated its poverty reduction strategy in 2004 National Growth and Poverty Reduction Strategy (NGPES – the PRSP), which identified 47 districts as priority areas for poverty reduction interventions. The 7th five year National Socio-Economic Development Plan (NSEDP), which will cover the period 2011-2015, continues the emphasis on achieving the MDGs by 2015, and transitioning from Least Developed Country status by 2020. The National Program for Rural Development and Poverty Eradication (NPRDPE), which is a key input to the NSEDP, has identified the following five priority goals for increased Government attention in rural areas:

- Small-scale infrastructure and service delivery and livelihood development;
- Decreasing the service and income gap between rural and urban areas;

[2] Socio-Economic and Poverty Atlas of the Lao PDR (2008) Swiss National Centre of Competence in Research (NCCR) North-South and Geographica Bernensia.

- Ensuring more integrated economic and social development, taking into account the importance of natural resource management and environmental conservation;
- Encouraging the participation and initiative of local communities based on the participatory development approach; and
- Improved international and regional cooperation.

The next phase of the Poverty Reduction Fund (PRF) Project will continue to contribute to the Government's poverty reduction agenda. Phase II of PRF focuses on reducing poverty in relatively remote and inaccessible areas through financing investments in small infrastructure that facilitate poor communities' access to basic services and markets as well as contributing to strengthening citizens' engagement and voice in local development. PRF I, implemented from 2002-2011, had a successful track record in delivering services in remote areas quickly and at scale. PRF I provided support to approximately 2,185 communities in 8 out of 17 provinces, 30 out of 144 districts, including 23 priority poverty districts (out of 45). Since its establishment in 2002, 3,396 subprojects have been completed in around 2,000 villages; including construction of 91 bridges, 62 health dispensaries, 1,237 water supply points, and 155 irrigation schemes. PRF has also upgraded 3,042 km of 420 rural roads, and constructed and/or upgraded 597 schools.

The Government of Lao PDR is currently implementing the second phase of the Poverty Reduction Fund (PRF) which continues the existing engagement and expands the scope of locations to new areas of the country as part of its National Socio-Economic Development Plan. The first phase of PRF developed a monitoring and field reporting system to track progress in project implementation. However, evaluation efforts under the first phase suffered from a flawed baseline, poor quality of data and lacked the ability to demonstrate project impacts for key areas of interest to the government including poverty reduction, utilization of and access to services, and community capacity. As a component to the second phase, the Government has recognized the need to implement a rigorous evaluation approach which will be able to attribute impacts on key outcome indicators to the project and determine how and why these impacts are occurring. This report presents the results of the baseline survey, the first of two surveys over the four year period of evaluation conducted on behalf of the government with the assistance of the donor community. Its function is to demonstrate the success of the methodology in determining attributable impacts as well as to provide a snapshot of initial conditions before project implementation began. In conjunction with the planned follow up survey in late 2016, it will allow the government to implement a rigorous impact evaluation to assess the effectiveness of PRF Phase II and inform the design of Phase III or other future interventions.

This report will present initial findings on the baseline conditions for a range of indicators in the following priority areas identified by the Government of Laos with the support of the World Bank:

- Household Welfare and Poverty Dynamics
- Utilization of Services: health care, education, water and sanitation
- Access to Roads and Markets
- Social Dynamics and Governance
- Access to information and participation

The section on poverty dynamics will be updated to include updated poverty lines from the most recent national household survey (LECS V) when they become available.

This report is organized as follows:

- Section 2 presents the background for the Lao Poverty Reduction Fund project.
- Section 3 describes the methods and data collection.
- Section 4 presents findings on baseline conditions for indicators in the priority areas listed above as well as balancing tests to confirm the validity of the methodology
- Section 5 provides conclusions and considerations for the next survey round and for Lao PRF II Implementation

2 Project Description

2.1 Selection of Project Locations

The PRF II is currently being implemented in 274 rural kum bans (sub districts) in 38 districts in 10 provinces. Specifically, the Project provides support to villages in six of the seven PRF I target provinces (Savannakhet, Saravanh, Houaphanh, Luang Namtha, Sekong and Xiengkhouang) and an additional four new provinces (Phongsaly, Oudomxay, Luangphabang, and Attapeu). The kum ban is the basic unit for poverty targeting. The Project identified kum bans for PRF II on the basis of the following criteria:

- Kum ban poverty criteria specified in Government's Decree #285/PM, specifically those related to poverty incidence, access to a road, access to water, and access to education and health services;
- Geographic location in terms of operational access and administrative cost-effectiveness; and
- The presence of other similar programs in these kum bans.

2.2 Project Development Objective

The PRFII Project Primary Objective is to improve the access to and the utilization of basic infrastructure and services for the Project's targeted poor communities in a sustainable manner through inclusive community and local development processes. Based on this, the project has identified a set of key outcome indicators:

- Improved access to and utilization of basic economic and social services in kum bans supported by PRF:
    - % increase school enrollment
    - % increase in access and utilization of health services
    - % increase in access to and utilization of safe water sources and adequate sanitation
    - % increase in access to and utilization of roads
    - Lowest two quintiles benefit from above services.
    - Decision-making on allocation of PRF resources involve at least 40% women and 60% poorest community members
    - Greater than 75% satisfaction levels reported by beneficiaries in targeted villages regarding improved services and local development planning.

2.3 Description of Project Activities

2.3.1 *Community Development Grants*: The primary intervention component is the use of kum ban-based block grants for community development planning and subsequent construction of infrastructure sub-projects. The kum ban planning process is undertaken on a three year rolling basis. Villagers prepare development plans that are integrated at the kum ban level through an inclusive process led by elected village representatives. Kum ban plans are then revalidated on an annual basis through a participatory process at the village, kum ban and district levels. The planning process includes a detailed assessment of communities' needs using social mapping and other relevant tools to identify priorities and ensure the voices of vulnerable groups are heard and included in the selection of the priorities. Kum ban facilitators assist communities to develop plans and also monitor progress. Sub-projects are implemented at the village level.

Each targeted kum ban receives upfront a four-year budget to inform its planning and prioritization. An average annual budget allocation of US$35,000 is provided to PRF II target kum bans, for a total average investment amount per kum ban of US$140,000 over four years with sub-projects financed and implemented on an annual basis. Sub-projects are selected for financing at the kum ban level by the PRF kum ban committee (consisting of elected villagers including women and ethnic groups). PRF district staff, district local government and sector officials provide technical validation of proposals. The final decision for sub-project financing is made at the kum ban level by the PRF kum ban committee based on transparent criteria and process as specified in the Project Operations Manual including:

- 75% of sub-projects must benefit directly the poorest communities within the kum ban.
- Sub-projects must meet appropriate technical standards for infrastructure agreed upon with relevant sector ministries

2.3.2 *Local & Community Development Capacity-Building and Learning* Communities receive training to better assess their own needs, discuss identified needs with local authorities, implement and supervise the construction of small public infrastructure investments, procurement, financial management, operations and maintenance, and lastly monitor outputs and outcomes at the community and kum ban levels. Village training activities are directly related to sub-projects financed under Community Development Grants (such as establishment of Parent Teacher Associations for schools, water user groups, etc.).

Section 3: Data and Methods

3.1 Survey and Evaluation design

3.1.1 *Objective and Overview*

The objective of the Lao PRFII impact evaluation is to obtain credible evidence on the impact of PRF II on key indicators *attributable to the project*, as well as a deeper understanding of how and why these impacts are occurring. The evaluation is a randomized experiment; it utilizes both quantitative and qualitative methods to assess project impact on the following set of research questions and corresponding key indicators based on Lao Government's identified priorities:

Table 1: Research Questions and Indicators

	Key Research Questions	**Indicators**
1	What is the impact of PRF on **poverty reduction**?	Per Capita Consumption Poverty Transition
2	Does PRF **improve utilization/access** to basic services (education, health, water, roads)?	Utilization rates Cost of transport to services/markets Time and resource savings Composition of good produced which are consumed at home vs. sold in markets
3	Does PRF **increase villagers' awareness and participation** in development?	Incidence and Quality of Participation in decision-making Access to Information
4	Does PRF **increase social capital**?	Social Cohesion and collective action Social inclusion and Trust
5	**Who benefits** from PRF? Poorest? Women? Ethnic minorities? Persons with disabilities? Other?	As above for defined groups
6	Are government officials and villagers **satisfied** with PRF?	Perception and Satisfaction of benefit and project impact

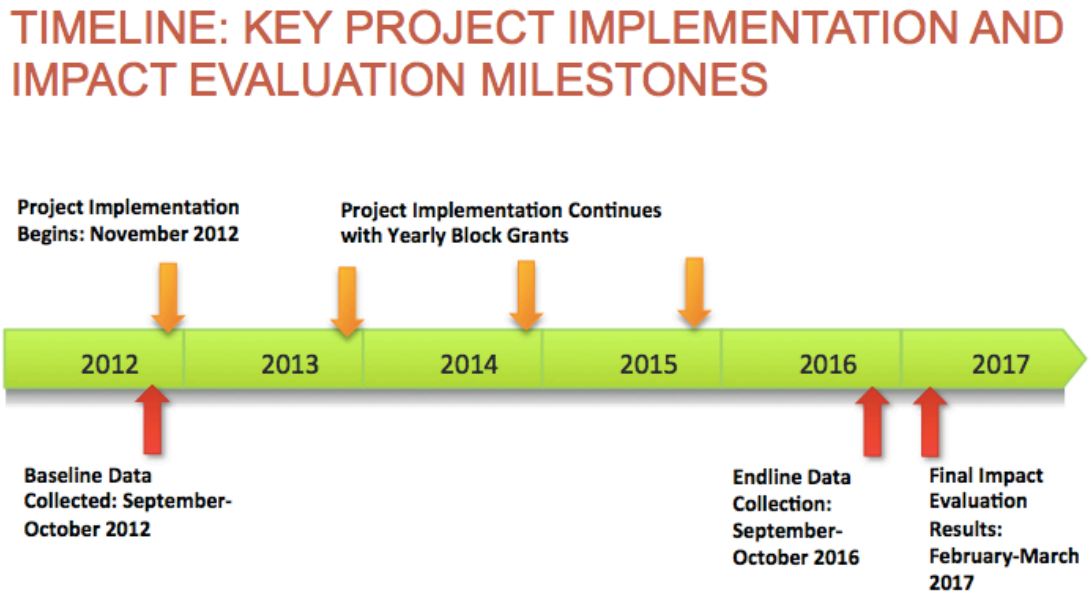
		Ownership and Sustainability of Infrastructure

The objective of the baseline survey is to capture data on these indicators at initial conditions before the project begins in order to (1) identify impacts attributable to the project and (2) provide a snapshot of initial conditions before the project begins.

Two waves of evaluation surveys are used to evaluate the impact of Lao PRF II. The baseline survey was implemented in September-October 2012 before project activities commenced in November-December 2012.[3] The baseline survey was overseen by the World Bank, who contracted a local survey firm, Indochina Research Ltd to undertake the data collection and the qualitative study. The surveys are co-funded through a multi-donor trust fund with support from the governments of Australia and Switzerland. A follow-up survey is planned in September-October 2016 which will allow for four project cycles over the period of evaluation. The follow up survey will revisit the same respondent households from the baseline survey to create a longitudinal panel. This approach allows for the estimation of impacts which are attributable to the project, and the behavioral responses of individuals and households to the project activities. The potential problem of using a panel-based approach is that attrition of households may introduce bias into the final results. The evaluation will seek to minimize the potential impact of attrition by tracking household which have moved out of locations where they reside at the time of the baseline when the follow up survey is conducted. A qualitative component was also fielded simultaneously with the baseline survey and will be conducted again the same locations simultaneously with the follow up survey in 2016.

[3] Some locations in Attapeu province began socialization and sub-project proposal development before the baseline survey began. However, decisions on which sub-projects to fund and the procurement process was not completed before the baseline survey was completed in mid-October, 2012. Any difference seen in data?

Figure 1: Project Timeline



3.1.2 Quantitative Baseline Survey and Instrument Characteristics. The baseline survey conducted interviews with 4393 households[4] and **25,125** individuals in eleven districts in four provinces[5]: Phongsaly, Oudomxai, Luang Prabang and Attapeu The instrument utilized questions from the national household survey (LECS), conducted by the Department of Statistics, to the greatest extent possible in order to allow for comparison. This generally comprised all sections aside from the modules related to Access to Markets, and Social Dynamics and Governance. The instruments were field tested three times in village locations which have similar poverty rates and significant minority populations in order to ensure that interviews where translation of the instrument by enumerators produces similar comprehension from non-Lao speakers as with interviews conducted in Lao. The survey instrument included the following sections and corresponding respondents:

Table 2: Survey Instrument Modules and Corresponding Respondents

Instrument Section	Respondent
Household Roster, Housing Conditions. Access to Markets	Head of Household
Access to Education, Health and Employment	Individuals -Health: All individuals -Education: All individuals 6 years of age and over

[4] The number of households interviewed (4.383) was out of an expected 5,000 total.

[5] Note: the 4393 interviews completed was based on an original target of 5000 households.

	-Employment: All individuals 10 years of age and older
Social Dynamics and Governance	One respondent per household: 50% male, 50% female assigned randomly (head of household or spouse).
Village Survey	Village Head

3.2 Qualitative Component design[6]

3.2.1 Objective and Overview The primary objective of the qualitative component is to document the conditions regarding PRF II project objectives and principles before project implementation in treatment and control sites and identify underlying causes and factors that affect these conditions and are likely to influence project implementation and outcomes. The qualitative component was conducted simultaneously with the quantitative component.

3.2.2 Methods The study utilized a combination of key informant interviews and focus group discussions to interact with local government officials, PRF local staff and community members. The composition of community member focus groups considered gender, poverty and ethnic minority status. Thirty three people were interviewed directly and 105 focus group discussion were conducted (with 5-10 participants for each group). A description form was also completed for each village in order to document the economic, infrastructure and geographic context.

[6] A more in depth discussion of the qualitative component methods and design can be found in the full qualitative report submitted separately.

Table 3: List of Key Informant Interviews and Focus Group Discussions

Key informant interviews (at district, kum ban and village levels)	District Government Head	1
	Village head	1
	Other village official	1
	PRF District Head and Staff (other development project staff in control areas)	3
	PRF Kum ban Facilitator (other development staff in control areas)	1
	Other community leaders/elders (including 1 woman and 1 member of a minority group at village level)	3
	Total Interviews:	**10**
Focus group discussions (in each village)	Poorer villagers – male	1
	Poorer villagers - female	1
	Ethnic Minority villagers – male	1
	Ethnic Minority villagers – female	1
	Ethnic majority villagers – male	1
	Ethnic majority villagers - female	1
	Formal groups (village associations, women's groups, savings groups etc.)	4
	Total FGD's:	**10**

3.3 Sampling Design

3.3.1 *Sampling Overview* For the purpose of the impact evaluation, participation in Lao PRF II for the eleven districts in the four provinces was assigned randomly by kum ban, the unit of project implementation. The sampling frame of kum ban was limited by the number of districts and kum ban planned for the four new provinces joining PRF for Phase II. The plan for implementation was for 14 districts and 114 kum ban in Phongsaly, Oudomxai, Luang Prabang and Attapeu provinces. Selection of the initial 114 kum ban were made by taking all kum ban in the 14 districts with poverty rates greater than 40%. Forty-four kum ban were selected to participate in the evaluation, two treatment and two control from a sampling frame consisting of all kum ban which met the government's criteria for selection into PRF II including a minimum estimated poverty rate greater than 40% for a total of 22 treatment and 22 control kum ban. All districts were newly beginning participation in Lao PRF II and were not a part of the original PRF I project. The reason for the focus on new locations is to be able to establish a control group which has not previously received PRF assistance. Because under PRF I all kum ban within a district received the project, a comparison of PRF II locations which previously received PRF I would necessitate the use of comparison of kum ban from different districts, which would

not be ideal given the variation in governance environment, economic conditions, topography and other factors across districts.

Table 3: Province and District Kum ban Poverty Distribution

Province	District	Number of Kum ban With Poverty Rate >40%
Phongsaly	Sam Phan	8
	Mai	7
Oudom Xai	Na Mo	5
	Nga	9
	Beng	7
	Houn	13
	Pak Beng	11
Luang Prabang	Nam Bak	7
	Phone Xay	10
	Viengkham	10
	Phoukune	7
	Pak Zaeng	8
Attapeu	Samakkyxay	8
	Sanarmxay	6
Total	14	114

3.3.2 *Sample Size Estimation.* Power calculations were conducted on a range of key outcome indicators including per capita consumption, enrollment rates for secondary education, access to health care, sanitation, source of drinking water, access to roads, and poverty rate (See Annex B). Sample size was then determined based on an expected change in the difference between treatment and control groups in access and utilization of services indicators of between 5-6% over the course of the evaluation period. The resulting sample size requirements indicated that approximately 40 kum ban consisting of 20 treatment (PRF II) and 20 control locations were needed to identify impacts.[7]

3.3.3 *Sample Selection* Sample selection was then conducted via the following steps:

- District Selection: a total of 11 out of the 14 districts were selected for the sample, apportioned to each province based on population. Phongsaly and Attapeu, each contained only two PRF II districts, each of which was assigned

[7] It is important to note that the sample size is not sufficient to detect impacts for changes in real per capita consumption.

automatically to the sample; for Luang Prabang and Oudomxai, 4 and 3 district respectively will be selected randomly from the planned five in each district.

- Kum ban Selection: Two treatment and two control kum ban were selected via simple random selection from within each district for a total of 44 kum ban. Control kum ban will not receive the project throughout the period of evaluation.
- Household Selection: Within each Kum ban, 100 households were selected randomly from for a total of 4400 households. The 100 households are distributed evenly across all villages in the kum ban by dividing the 100 households by the number of villages.[8] Households are then selected randomly using lists constructed in each village with the assistance of the village government.[9]
- For the qualitative component, 16 villages were chosen from the locations surveyed under the qualitative component. Within each province, 2 districts were selected with one treatment and one control village in each district. Districts and villages were chosen purposively to reflect geographical, ethnic and socio-economic variation.[10]

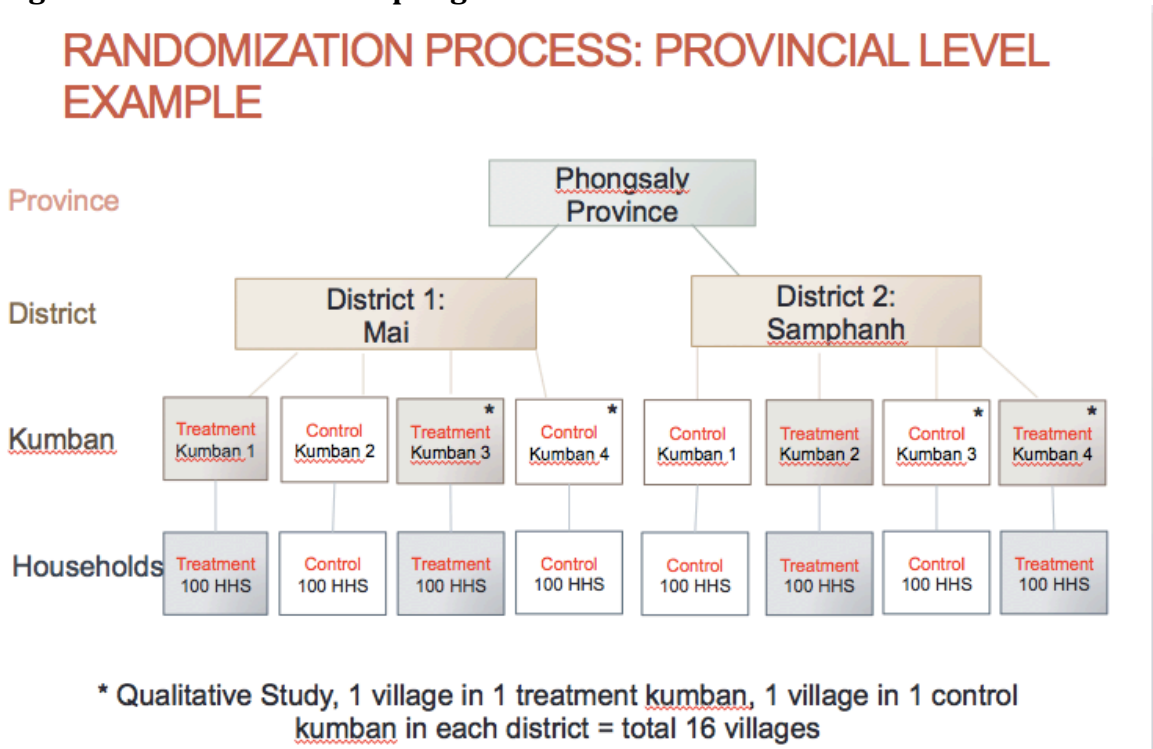
The following chart demonstrates the sampling process for a single province:

[8] Post selection weights using population data were created to ensure estimates reflect equal probability of selection for each observation. See Section 3.3 below.

[9] Households were selected via compiling a list from the village head. A random starting number and interval was chosen by lot. Households were selected by taking the household of the randomly selected starting number as the first household and then assigning subsequent households using the interval number going down the list. Households which refused to be interviewed or who could not be contacted were replaced by additional households further down the list, again using the randomly selected interval number.

[10] Discussions were held between the research team and PRF II district teams given the limited information on village characteristics at the national level. Villages which demonstrated higher poverty rates, remoteness from district and village centers and ethnic group variation were selected by the field teams in consultation with the World Bank evaluation team. Every effort was made to ensure that the treatment and control villages in each district had similar profiles with respect to the characteristics discussed above.

Figure 2: Randomized Sampling Process



3.4 Sampling Weights

Weights were constructed to ensure that the results from the survey data are representative of the population over which the sample was selected, in this case the eleven districts which are included in the sampling frame. For the Lao PRF II impact evaluation, this is all households living in the eleven districts chosen to participate in the evaluation. All results presented below were estimated using sampling weights. The weights reflect the inverse of the probability of each household being selected for the sample given its residence in treatment and control kum bans:

Probability of a household being selected = (probability of district being selected X probability of a kum ban being selected X probability of a household being selected within its kum ban)

The probability of a district or kum ban being selected is simply the number of districts or kum bans selected divided by the number of kum bans identified as having the potential for PRF II expansion (i.e. >40% poverty rate). The probability of a household being selected is simply the number of households selected into the sample in each village divided by the total number of households in the village.

Section 4: Results

This section presents the primary findings from the analysis of baseline data from both the quantitative and qualitative components. Section 4.1 discusses the balancing tests which examine the validity of the evaluation methodology. Section 4.2 addresses household welfare. Section 4.3 presents evidence on utilization of education and health services. Section 4.4 reviews access to clean water and sanitation. Section 4.5 reviews results from the social dynamics and governance module. Finally, Section 4.6 discuses briefly the incidence of disability. Results are found in Annex A. Poverty status is defined as households and individuals in those households in the bottom 40% of the consumption distribution. All results reflect percentage of households unless otherwise noted. Descriptive statistics are calculated using samples weights and village-level clustering for the full sample as well as for sample sub-populations:

- Poverty status
- Ethnic minority group: Lao, Khmu, Hmong, Others[11]
- Province: Phongsaly, Oudomxai, Luang Prabang, Attapeu
- Farming occupation
- Gender

4.1 Balancing Tests

The primary objective of the baseline survey is to determine that randomized assignment of Lao PRF II sub-districts and control sub-districts was successful in ensuring that pre-project conditions across the two groups for factors which affect key outcome indicators are identical. In order to test this, comparison of means and were conducted on 49 outcome indicators and village/household characteristics.[12] The results are found in Table 1.

In general, the balancing tests confirm that the treatment and control areas are statistically similar for most outcome indicators of interest. Here we highlight a few indicators where differences are statistically significant and potentially represent pre-project differences between the two groups. The cost of transport both to access health facilities and district markets demonstrate some evidence for significant differences. In the case of access to markets, households in the treatment group are spending on average approximately 14,000 kip per trip more than households in the control group. For access to outpatient health care, treatment

[11] Others includes: Tai, Leu, Nhuane, Bid, Yru, Trieng, Taoey, Yae, Brao, Harak, Ouy, Cheng, Akha, Singsili, Sila, Pouxang ethnic groups.

[12] Comparison of Distribution Tests were also conducted. The results did not differ from standard Comparison of Means tests. Results are available on request.

households are spending approximately 11,000 kip less to reach a health facility.[13] On access to education, there is also some evidence for pre project difference at the secondary school level. For children aged 13-15, treatment groups are 8 percentage points more likely to be enrolled than similarly aged children in control households. Finally for social dynamics and governance indicators, treatment households are significantly more likely to contribute materials or funds to community development projects (such as repairing roads or drainage ditches) with a 17 percentage point difference in comparison to control households.

It is worth noting that for a large group of indicators, it is likely from a statistical standpoint that a small group of indicators will demonstrate differences purely by chance. However, the post-project implementation analysis to determine impact will attempt to correct for the identified the pre-project differences discussed above. All remaining indicators do not demonstrate significant differences between treatment and control households, including key household welfare and access indicators such as per capita consumption, food consumption percentage of total consumption and access to outpatient health care and primary education.

4.2 Household Welfare and Market Access

This section discusses the economic and welfare characteristics at the household level including market access and poverty characteristics. Overall, there is significant uniformity in terms of household economic activity:

- 92% of all households are farmers, including 94% of all poor households.
- Only 22% of households are able to sell products beyond what they consume.
- Of this 22%, only 8% of households are able to sell goods outside the village (or less than 2% of all households).

Before implementation begins there is little difference for the vast majority of households with respect to economic opportunities: households face significant constraints with respect to availability, time and cost of transport in accessing markets beyond the village. Thus, the variation in consumption patterns that do exist are largely due to intra-village factors (size of plots, skill and capital base, intra village networks) rather than differences in public infrastructure across villages or sub-districts.

[13] The significant level of the difference in the mean rate of contribution to of materials or funds to community development projects between treatment and control households is at the 5% level. The significance level for cost of transport to district markets approaches the 5% level. This is in contrast to cost of accessing health care, rate of secondary enrollment for children aged 13-15 and perception of access to health care and education which are only significant at the 10% level. For balancing tests, the 10% level threshold is used as the standard to identify significant differences in pre-project conditions.

4.2.1 Consumption Patterns and Key Determinants

Table 2 shows rates of monthly per capita consumption and the ratio of food to total consumption across poverty status, ethnic group, level of education of the household head, occupation status (farmer vs. non-farmer) and across the four PRF II provinces. With respect to regional variation, there is no statistically significant statistical difference in per capita consumption or the food consumption percentage of total consumption across the four provinces. Similarly, there is no difference across non-Lao ethnic groups or households whose heads have obtained primary education or less. Key factors which contributed to significant differences in consumption include Lao ethnic group status[14], education of the household head, occupational status as a farmer and household size. Several of these factors are correlated as Lao ethnic group households are approximately twice as likely to have more than a primary education and approximately half as likely to be poor or a farmer. The results are similar when looking at poverty incidence across as shown in Table 3: households who are non-farmers, Lao ethnic group status, smaller household sizes and high levels of education are less likely to be poor. This is consistent with national surveys including the most recent version of the The *Lao* Expenditure and Consumption Survey (*LECS*) conducted in 2008.

4.2.2 Constraints to Market Access

The lack of significant variation in pre-project conditions for key measures of household welfare are in part due to a relatively uniform set of market access constraints which impact most villages in sample are subject to. First, 15% of the villages in the sample had no access to a road. For villages with access to a road Table 3 shows rates of access for cars/trucks during the dry and rainy seasons. Notable is the significant increase in road access in both in rainy and dry season the further south the project province is located with only 5% of village in Phongsaly having access to a road in the rainy season versus 48% in Attapeu. Overall, the rate of access in the rainy season is only 30% across all four provinces. Rates of access to public transport are also low at only 17% of all villages ensuring that villagers must secure private transport.

As noted above, a key consequence of limited access to markets is the rate of goods sold outside the village. Just 8% of households which sell products beyond what they consume sell those products outside the village. Table 4 shows primary reasons why households do not choose to sell outside the village. Eighty-two percent of respondents indicated transport-related constraints (cost, distance, road condition or lack of transport) as the primary reason for not selling outside the village. Table 5 provides the average time and cost to reach the district center by province. Across the entire sample, it takes on average over 3 hours and approximately 23,000 kip each way. Access times and transport costs are highest in

[14] Ethnic group status determined by response of household head.

Phongsaly (already with limited road access) and Attapeu (despite better overall road access in comparison with Northern provinces). Lack of market access comes at a significant cost with respect to prices which products will bring. From the perception of the respondent and village heads, prices for products sold in the village were 65% higher in the district center.

Findings from the qualitative component emphasize market access constraints and remoteness, with households averaging 5 hours to access the district center via walking and reporting that prices for the sale agricultural goods in the village are half that of the prices which could be obtained in district markets. ? Lack of transport (private or public), distance, road conditions during the rainy season and inability for larger vehicles to access villages prevent households from selling goods outside the village. The primary points of sale are intra-village and trader middlemen:

> "*We don't have a car and the market is too far. If we go by motorbike we cannot carry many goods and it is not worth the trip to the market…"*
> -(FGD Poorer Male, Tangdu Kumban, Bang, Oudomxai).

> "*During the rainy season the road is slippery and impossible to travel by truck. The only way to go during the rainy season is to walk.*"
> -(FGD, Poorest Khmu male, Tintok, Phearlor KB, Mai, Phongsaly)

> *"Since there is no local bus, we have to walk to Mai village which takes 2 hours and then take a local bus to district market."*
> (FGD poorer male, Tangdou, Bang, Oudomxai)

4.3 Access to Services: Health Care and Education

Infrastructure constraints related to road access and transport also feature prominently in health care and education utilization patterns. When services are available in a village, both the usage and perception of access are high. However, when households are required to leave the village, infrastructure constraints significantly limit access. The result is high rates of usage of basic services offered in villages and significantly lower rates of usage for services which are offered outside the community.

4.3.1 Education and Health Utilization Patterns

In the sample, all but eleven villages have a primary school and rates of primary school enrollment are correspondingly high at 90% for the entire sample of children aged 7-12. As shown in Table 6, there is some variation due to poverty status, with children of non-poor households and non-farming households attending at rates

approximately six percentage points higher than children from poor households and farming households. There is wider variation across both ethnic groups and by province with children from Lao and Khmu families attending primary school at rates above 90%, as well as children from households in Luang Prabang province. Children from households of Hmong or other ethnic groups as well as Oudomxai, Phongsaly and Attapeu have attendance rates below 90%. Male and female children appear to attend primary school at the same rates.

A similar pattern exists for lower secondary school but with a lower overall benchmark at 71% across the entire sample. The same groups as above which were above 90% enrollment for primary school are above average for lower secondary school. Groups below average for primary school are below 71% enrollment for lower secondary school with the exception of Oudomxai province, where children attend at a 72% rate. In addition, at the lower secondary school level, a gender gap of approximately 10 percentage points begins to appear with boys enrolling at 76% and girls at 66%. Findings from the qualitative study suggest that both economic and social factors contribute to the gender gap in secondary school enrollment:

> *"I don't want to support my daughter to go to school. When she finishes primary school, she must stop and help her mother at home. I support my son to have a higher education. When he has a higher education, he can work in a good place and he can travel anywhere."*
>
> (FGD, poorer Khmu male, Lay noi, Lay KB, Bang, Udomxay)

> *"I would not support my daughter for higher education, she won't get into university. Women from a rural village will get married when they are 14-15, but I hope our son will go to university."*
>
> (FGD Talieng Male, DakSaeng, Xamluang KB, Xanxay, Attapeu)

Table 6 below also summarizes the utilization patterns for individuals who are sick over the last four weeks and choose to seek care at modern health care facility with an overall rate of 37%. The results demonstrate similar patterns as for school enrollment above. Factors highly correlated with higher consumption and lower poverty rates such as non-poor, non-farming and Lao and Khmu ethnic group status typically seek care when sick at rates between 2-15 percentage points above average with poor, farming and non-Lao ethnic groups seeking care at between 2-10 percentage points below average. With respect to regional patterns, rates of seeking care are above average in Oudomxai and Attapeu, while they are below average in Phongsaly and Luang Prabang, for the latter, a change from the enrollment rates discussed above.

4.3.2 Constraints to Education and Health Care Utilization

Utilization patterns for health and education are strongly shaped by location of available points of service. Table 7 provides information on the availability of

facilities in villages as well as the time and cost to reach facilities located outside the village: primary schools, lower secondary schools and dispensary/health clinics. When schools and/or health clinics are located in villages, rates of enrollment and use of health services rise significantly, suggesting that infrastructure limitations are a critical factor in services utilization. The rate of seeking health care more than doubles from 25% to 56% when health clinics are located in villages as the average travel time of 102 minutes and travel cost of approximately 20,000 kip each way is eliminated. The qualitative study results also support the findings that infrastructure constraints shape utilization decisions, frequently turning to traditional medical care sources instead of travelling to modern health care facilities.

"*Going to the district hospital costs around between 40,000 to 1,000,000 LAK, maybe even higher.*"

(FGD poorer male, Vangbong, Vangbong KB, Viengkham, Luang Prabang)

However, the qualitative study also points to additional factors: the potential for poor service quality and discrimination. When villagers access a health facility, they might not receive the treatment that they expect:

"I had difficulties going to use the services of the hospital; I thought that the hospital is equipped with fully advanced treatments, but it is not. I was there, but I couldn't even find a bed to stay in."

(FGD poorer male, Vangbong, Vangbong KB, Viengkham, Luang Prabang)

Many villagers have feelings of discrimination when they go to health care center. A poorer male expressed feelings of being excluded:

"Doctors and nurses did not take good care of the poor people. Sometimes they ignore poor people, when we were there, they pretended not to see us."

(FGD poorer male, Vangbong, Vangbong KB, Viengkham, Luang Prabang)

When secondary schools are present in villages, enrollment rates reach 86%, nearly approaching primary school enrollment rates, suggesting that infrastructure constraints are critical in shaping enrollment decisions. Cost and time required for travel to lower secondary school is significantly lower at approximately 7,000 kip and 28 minutes respectively. However, this may be due to the practice of children living with relatives or boarding in sub-district and district centers where lower secondary schools are located. The primary means of access to secondary school is walking at 88% with motorbikes and bicycles adding only an additional 10%. These results suggest that children must live relatively close to schools in order to attend. Given that most children do not travel far, the majority of children whose villages do not contain secondary schools are forced to live in the school facility location. Thus

the cost of boarding children in locations with secondary schools is a key factor limiting higher enrollment rates.

The qualitative study provides additional insights on the costs of boarding as a factor in school enrollment. At the secondary school level, since only 10% of villages have lower secondary schools, children must either travel several hours each way to reach district and sub-district centers or board at the school location. The estimated costs per year based on focus group discussions with different socio-economic groups are shown in Table 8. For the poorest families, the cost of attending primary school is approximately 150,000 kip (or USD$19) per year. This cost increases significantly to 700,000-800,000 kip (US$90 - $102) per year at the secondary school level due to the cost of travel, food and materials if they are fortunate enough to have relative or other families to stay with. If boarding costs are included, estimated at an additional 150,000 kip ($19)per month, the costs increase even further.

4.4 Access to Water and Sanitation

4.4.1 Access to Clean Water

Rates of access to clean water are highly dependent upon the use of rain water as a clean water source, described in Table 9. When clean water is considered as a "safe" water source, average rates of access are at 76%, with little variation across different groups. Regionally, the use of rain water is evident in that the three northern provinces with higher rainfall totals have much higher rates at or approaching 80% than in Attapeu where rainfall totals are lower and rates of water access are at 51%. When rain water is not considered a safe water source, rates drop significantly, down to 5% of households who have protected wells or pipes, again with little variation aside from Lao and other ethnic group status which are at 11% and 14% respectively. Regionally, Attapeu, already less dependent on rainwater averages 25% of households.

The safety of rain water systems as water sources is critical given the problems with other existing sources highlighted in the qualitative study. The average distance to fetch water in the dry season is only 100 meters, but these sources may be unsafe or not accessible given broken water systems, polluted rivers and water fees, particularly for poorer households:

> *"2 months ago, 2 boreholes were broken. The water committee had to ask villagers who use those boreholes to pay for repairs and now they are working again. People who didn't contribute for repairs are not allowed to use the boreholes. This is a big problem now, with people fighting each other for water."*

(IDI Village headman, Boungkeo, Oudomsouk KB, Sanamxay, Attapeu)

"I do not have money to pay the water fee. The fee is not much, but we have 6 people in our household and 6,000 LAK per person per year will cost us 10 kg of rice."

(FGD poorest male, Boungkeo, Oudomsouk, KB, Sanamxay, Attapeu)

"Over the last 2 years the Sekong River is no longer clear, sometimes it smells bad, and animals die too often from drinking the chemicals in the water. Gold mining and rubber plantation companies have destroyed so much of our nature…"

(FGD Male, Boungkeo, Oudomsouk, KB, Sanamxay, Attapeu)

"The Sekong River is polluted by the Vietnamese rubber plantation company throwing empty pesticide bottles into the river. The gold mine in Vat Tad of Attapeu province is polluting upstream in the Sekong River…"

(FGD Male, Hadxaykham, Oudomsouk, Sanamxay, Attapeu)

4.4.2 Access to Sanitation

Table 9 also summarizes the results for access to proper sanitation (defined as modern or normal squat toilet with a water mechanism) which is 33% across the entire sample. There is significant variation across groups, in contrast to many indicators presented above. Factors correlated with higher levels of consumption demonstrated higher rates of access to sanitation including Lao ethnic group status (49%) and non-farming status (47%). Khmu and Hmong ethnic groups are near the sample average at 34% and 33% respectively, while households with Others ethnic group status are significantly lower at 21%. There are large regional differences as well with Phongsaly, Oudomxai and Attapeu ranging from 14-29% in comparison with Luang Prabang province at 46%.

Findings from the qualitative study point to the fact that acquiring adequate facilities is not the only factor in ensuring safe sanitation practices. Many households have proper squat toilet facilities but did not use them as they preferred other non-toilet locations for defecation. Maintenance of toilets can also be an issue as villagers do not know how to conduct proper repairs and toilets are abandoned:

"They didn't get used to defecating in the toilet, so they broke it."

(FGD poorer female, Vangbong, Vangbong KB, Viengkham, Luang Prabang)

"My toilet is broken and dirty due to a lack of water to clean it and a lack of maintenance to keep it clean."

(FGD Poor male, Lay noi, Lay KB, Bang, Udomxay)

4.5 Social Dynamics and Governance

A key aspect of the Lao PRF II approach is the galvanization of community capacity and social dynamics to empower communities and individuals to further their own development goals and increase the quality of local governance. The program seeks to achieve these objectives by increasing household participation in community and activities and meetings, increase transparency and access to information, promote collective action among community members and government, and encourage community organization to petition government for better service delivery.

Broader findings from both quantitative and qualitative components point toward a well-established system of community and governance engagement via regular, well attended meetings. However, the quality of participation and "uptake" of information presented to communities are more limited. In addition, despite high rates of attendance across households, frequently, women and minority groups face significantly more problems in attending meetings due to language and capacity constraints. Villages have a well-developed system for accountability with a set of formal channels to identify needs, provide services and implement projects, and resolve conflict. Information on community needs is gathered via well-attended village meetings. Requests, needs and grievances are handled individually through existing associations. When regular channels are not effective, other means to ensure accountability are limited as collective engagement with local government to raise problems/issues is rare and capacity among villagers with respect to ability to engage local government is limited, particularly among the poor and minority groups. Results from the quantitative component are described in Tables 10, 11, and 12.

4.4.1 Participation and Access to Information

Participation is high at village meetings with attendance rates at 91% or above of households attending the most recent village-wide meeting for all groups with little variation (Table 11). This is partly due to well-established community norms as well as the threat of fines in some cases:

"I worried my buffalo might go eat other people's rice fields but the fine was higher if I missed the village meeting."

-(FGD, poor male, Xamluang Kum ban, Xanxay, Attapeu)

Not all groups are included. Women do not attend as frequently: 64% of households reported that the most recent meeting was either entirely or mostly attended by men and only 12% of women attended the most recent village meeting. The quality of participation (defined here as simply speaking in meetings over the past six

months) is more limited. Overall rates are at 34% with higher speaking rates for Lao ethnic group households and non-poor households. Speaking at meetings was also more prevalent in Phongsaly and Attapeu at 41% and 40% respectively. The poor, and Khmu and Hmong ethnic groups saw lower speaking rates.

The qualitative study provides further insight into attendance and utilization patterns. Women and some ethnic minority households face capacity and language issues that reduce their ability to absorb information and participate effectively.

> *"We don't specify who should attend the meeting. If a wife is home, a wife attends, but usually husbands attend the meeting. On average, only 30% of women attend the meeting, but they don't like to talk because they are shy."*
> -(IDI, Village headman, Sibounheuant Kumban, Houn, Oudomxay)

The primary speakers in meetings are village officials, the village chief and elderly association members. Women, the poorest families, and members of some minority ethnic groups tend to say little.

> "*I am shy to talk at the meetings because all the men look at me. Most women in this village are shy and don't have knowledge so they have no ideas to contribute."*
> -*(*FGD poorest female, Lay Kumban, Bang, Udomxay)

Despite high levels of participation, transference of information on community and village government affairs is more limited, despite a fairly formalized system of information flow from Districts to Village Head/Officials to the Community via semi-annual well-attended village meetings. Overall rates of households reporting access to information on use of village funds, use of project funds, and project planning is low: at 20%, 23% and 26% respectively. Poor households, farming households and households from Hmong and Others ethnic groups report significantly less access relative to Lao ethnic group, non-farming and non-poor households, very much in line with patterns observed for indicators reported above. Regionally, households in Phongsaly and Oudomxai provinces are much less likely to have access in comparison with households from Luang Prabang and Attapeu. The survey also asked households if they had detailed knowledge of the village development plan. Overall rates of understanding were higher than for the information access questions above, averaging 33%. Variation across groups demonstrated the same patterns aside from provincial groupings. There was also a relatively small but significant gender gap of between 4-6 percentage points across all information categories as well as for the village development plan.

Lack of active engagement on the part of many groups, including the poor, ethnic minorities and women may lead to lack of understanding of the issues discussed and decisions taken with language being a key barrier to active participation and transfer of information:

"Some women don't speak although they know the situation. They are not brave to talk. If the meeting is in Lao, they don't speak at all, but if the meeting is in Khmu, many of them will speak."

-(FGD poor Khmu female, Tangdu Kumban, Bang, Oudomxay)

4.4.2 Accountability and Collective Action

Communities are somewhat satisfied with village government performance. When interviewed, 67% of households responded that they were satisfied with the government's ability to address the most important problem facing the village (Table 11). Rates of satisfaction in problem-solving vary in similar patterns for indicators seen above as groups with higher consumption levels such as Lao ethnic group status, non-farming and non-poor households reporting higher satisfaction rates. These differences are relatively small: poor households are only 3 percentage points less likely to be satisfied with government performance. The findings point to general confidence and trust in the village government's ability to manage village affairs:

"*If the head of the village comes to collect 5000 kip from me without reason, I will give it to him. Even if I don't have the money, I will borrow from my neighbors and give it to him.*"

-(FGD poorest Khmu female Vangbong Kumban, Viengkham, Luang Prabang)

A weaving female from an ethnic group also confirmed that: *"I do believe what the village authority is doing for developing our village and for helping all of us to have better living conditions. He has tried very hard to get electricity for us."*

-(FGD weaving female, Oudomsouk Kumban, Sanamxay, Attapeu)

With respect to engagement with communities, households report very high levels of input-seeking by the government at 84% of households across the entire sample. There is little variation across groups although Lao and Hmong ethnic status, farming and Oudomxai households report between 73-76% rates of village government seeking input. Forty-five percent of households report that the community has significant influence over village decisions. Once again, there is little variation across groups. Poor households are 7 percentage points less likely to view communities as having significant influence in comparison with non-poor households. In addition, Lao ethnic group and Others ethnic group status reported rates of community influence at less than 40%. The greatest disparity was between the northern provinces and Attapeu, where just 28% of households viewed communities as having significant influence over village decisions. Very similar patterns were observed when households were asked whether the community could overturn a decision that the community disagreed with. Forty-five percent of households agreed that the village head's decision could be overturned. Among all three indicators, there was no gender gap.

Disputes and conflict resolution are handled primarily via one-to-one meetings between households and village officials or other prominent community members. Villagers do not seem to come together to jointly solve problems through collective action. Across the entire sample, only 8% of households indicated they had petitioned the village government on behalf of themselves and other community members. These rates showed little variation with slightly lower rates among poor, farming and Others ethnic group households.

The qualitative study points to skill and education-based capacity constraints as key factors in limiting collective and individual efforts at accountability and overall community influence on decision-making. Many households face difficulty with sufficiently expressing grievances in written or spoken form due to language issues. These problems particularly impact less included groups such as the poor, minority groups and women who are less likely to be proficient in Lao. In addition, some households noted that pursuing grievances already in the formal system or organizing community members around problems as too resource and time-consuming in contrast to the existing system where problems are reported primarily to village officials who reach a decision.

Requests to address problems are processed individually to the elderly association or a village official. However, this is process is not always effective and other means to ensure accountability are limited. The qualitative study noted several cases where villagers attempted to address grievances or resolve issues via regular channels but had little recourse or other options if the initial contact or request failed. With no response from the village head, community members could not negotiate for loans with the bank:

"*Nayobay bank has money for villagers to borrow. They wanted to have a meeting with villagers so that they can explain the procedures and conditions for loans but the head of the village didn't announce it to the villagers. When the Nayobay bank came, there was only one group out of five present. The rest didn't receive the information and were very upset."*

(FGD Male Sibounheuang, Sibounheuang KB, Houn, Oudomxai)

In another case, villagers faced issues of non-transparency in the collection of water fees but found no way to address the issue aside from an appeal to the village head:

"*I am not satisfied with the unfair collection and management of the water fee. The fee is not correctly collected and not correctly reported. I paid a fee higher than others, but the headman says that I paid the same as others.*"

(FGD Poorer Hmong Male, Thongtheung, Nambak, Luang Prabang)

4.4.3 Communal Capacity and Trust

While capacity to engage in collective action may impede community involvement in village affairs, households demonstrate willingness to provide time and materials/resources to support community development projects (such as road or drainage ditch repair). Across the entire sample, 95% of households are willing to donate time with only households from Other ethnic groups and Attapeu falling below to just below 90% (Table 13). With respect to materials/resources, rates of wiliness to contribute are lower at 62% but still relatively consistent across groups. As expected, poor and farming households are 6-8 percentage points less likely to contribute. The largest disparities are found in Phongsaly and Attapeu where contribution rates are 43% and 39% respectively, and among Other ethnic group households at 40%. The relatively lower rates of contribution from households from Other ethnic groups further suggests concerns over language and capacity barriers with respect to participation and engagement.

Two measures of intra-communal trust were included in the social dynamics and governance module. The results indicated that trust both with respect to expectation of positive behavior and availability of help and support are relatively high. The survey first asked households if they would trust a non-family member to buy something for them at the market. Positive responses were high at 94% with little variation. Households were also asked if someone beyond family or relatives would be available to lend them 100,000 kip (approximately $12) to pay for weekly expenses. Households responded either "definitely" or "probably" 75% of the time across the same. Variation across groups was most significant between poor and non-poor households with a gap of 14 percentage points.

4.5 Disability

The survey instrument included a set of questions designed to determine the incidence of disability across six categories:

- Difficulty Seeing, even with Glasses
- Difficulty Hearing even with a Hearing Aid
- Difficulty Walking or Climbing Steps
- Difficulty Concentrating or Remembering
- Difficulty Washing or Dressing Oneself
- Difficulty Communicating in Native Language so as to Be Understood by Others

Overall rates of disability are relative low (reported in Table 13). For the whole sample, rates of disability for seeing (6.3%), hearing (4.1%), concentrating (3.1%) and walking (3.6%) were relatively higher in comparison with washing (2.5%) and communicating in native language (1.6%). Despite low numbers for any particular

category, when considering the % of individuals reporting a disability from any of the six categories, the overall rate is 10.2%. There were no statistically significant differences based on gender or poverty status for any particular disability category or for having any disability. However, there is some variation across provinces. Households in Phongsali reported disability at rates significantly lower on average: less than half the total rate across all six categories. Rates of disability were similarly low at less than half the average in Luang Prabang as well, but only for washing and communicating.

5.0 Conclusions and Recommendations

This report has presented the initial results of the Lao Poverty Reduction Fund II Impact Evaluation baseline survey, providing an assessment of pre-project conditions for a range of indicators including household welfare, access to education, health, water and sanitation, and social dynamics and governance. Based on the results of the balancing tests discussed in Section 4.1, the baseline data is viable to be used in conjunction with an endline survey of the same households in 2016, which will enable the identification of impacts attributable to the project for the indicators considered above. However, the baseline data also provides insight into current conditions and challenges that PRF will face as project implementation proceeds. The report has four main findings.

The baseline findings demonstrate that the randomized assignment of kum ban into treatment and control groups has been successful. Balance tests confirmed that there are no pre-project differences in key outcome indicators or household and village characteristics, aside from four indicators related to cost of transport to markets and health clinics, secondary enrollment rate and rate of community members contributing materials or resources to development projects. While subsequent analysis will attempt to control for these differences, it is expected that given the large number of indicators, significant differences would emerge by pure chance in a few cases.

Second, there are key constraints related to limited access to markets and utilization of health and education services. The baseline data demonstrated that infrastructure constraints are key factors shaping poor market access and utilization of education and health services. When health facilities are located in the village, rates of those seeking care when sick are doubled relative to case of villagers having to leave the village to go to a facility. Almost all activity related to markets and health and education services is limited to the village itself due to lack of transport, travel times and cost of transport. Access to district markets would allow farmers to obtain prices which are double that which are received in the village from traders and middlemen. PRF is well-positioned to address these constraints either by building facilities for health and education in more villages, or by reducing the cost and time of travelling to markets, schools and health centers.

Although the overall profile of households is relatively uniform with respect to market access and service utilization, addressing infrastructure constraints, will help to address economically disadvantaged groups. While there is a significant amount of uniformity with respect to the economic opportunities and service utilization patterns due to the high percentage of subsistence farmers and infrastructure constraints limiting economic activity outside the village, differences which do exist across groups will assist households with challenges in accessing markets and services. Groups associated with lower levels of consumption including the poor, farming households and non-Lao ethnic

groups will be most helped by the relaxing of cost and time to reach markets and service facilities.

Capacity deficits are limiting the participation and contribution of community members in the management of village affairs. Villages which participated in the survey already have well-developed systems for engagement and transfer of information between local government and community groups in which there are high levels of participation across households. However, the uptake of information and propensity to collectively engage local government effectively with respect to community decision-making is more limited.

Some groups, including women and some ethnic minority groups face even more significant capacity gaps. Some community members do not have the same kind of broad-based access to active participation and information noted above, primarily due to even larger capacity deficits. While there is consistent participation even among poor households in village meetings, language and education barriers are significant factors for women and some ethnic minority groups which deters participation and transfer of information.

The results highlight some considerations going forward for PRF and the planned evaluation:

4. **Ensure alternatives to traditional infrastructure projects are feasible.** While standard infrastructure projects seeking to alleviate constraints are likely to be effective, if there are implementation problems such as difficulty staffing schools or health clinics in villages, solutions such as funds for boarding of secondary students or travel of sick community members to kum ban or districts centers should be considered as alternatives.
5. **Focus on the inclusion of previously excluded groups in decision-making.** Capacity-building and facilitation should focus on the inclusion of disadvantaged groups, particularly women and non- or limited-Lao speaking households. Developing ways around problems with language and existing education levels are likely to be important.
6. **Encourage use of new infrastructure to increase economic opportunities.** Given that the vast majority of households in the survey do not sell products outside the village and that prices are typically double that received via sales in the village, the project should focus on assisting farmers in maximizing the benefits of the project relaxing infrastructure constraints by managing production and planning to take advantage of new opportunities which become available, including getting goods to district markets and potentially crop selection.

Annex A: Tables

Table 1: Balancing Tests

Indicator	Mean (Treatment)	Mean (Control)	T-Statistic	P-Value	Observations
Sought Care when Sick	36.9%	36.8%	0.01	0.99	9345
Cost to Health Care Facility (kip)	23,873	44,333	1.82	0.075	1409
Secondary Enrollment	83.2%	75.5%	1.83	0.074	1657
Primary Enrollment	88.4%	91.6%	1.19	0.241	4620
Time to Secondary School (minutes)	25.3	24.7	0.15	0.881	1156
Cost of Transport to Secondary School (kip)	619	473	0.58	0.566	1156
Access to Safe Water Source (No rain collection)	4.2%	5.1%	0.25	0.807	4393
Access to Safe Water Source (Including Rain Water)	73.8%	78.1%	0.72	0.475	4393
Time to District Center (minutes)	256	252	0.04	0.971	4365
Cost to District Center (kip)	22031	37345	1.84	0.072	3424
Access to Sanitation	31.9%	33.9%	0.31	0.755	4393
Price in District Centers (kip)	245,547	334,978	0.58	0.562	349
Price in Village (kip)	245,547	188,818	0.93	0.356	981
Per Capita Consumption (kip)	375,418	350,216	0.46	0.646	4393
Food Consumption Percentage of Total	61.4%	61.8%	0.15	0.879	4393
Access to Information on Use of Village Funds	23.3%	16.4%	0.98	0.332	4393
Access to Information on Use of Community Funds	10.2%	10.2%	0	0.999	4393
Access to Information on Use of Project Funds	26.3%	17.7%	1.21	0.234	4393
Access on Information on Project Planning	29.3%	22.6%	1.36	0.18	4393
Attended Most Recent Village Meeting	95.5%	95.5%	0.01	0.992	4393
Spoke at a Meeting in the Last Six Months	36.8%	30.1%	1.5	0.141	4393

Detailed Knowledge of the Village Development Plan	32.5%	33.6%	0.23	0.82	4393
Petitioned the Government in the Last Twelve Months	6.9%	10.3%	0.78	0.441	4393
Government Seeking Input from the Community Regularly	83.4%	84.6%	0.23	0.822	4393
Community Can Reverse Decisions Taken by the Village Head	43.6%	45.9%	0.35	0.73	4393
Satisfaction with Village Government Capacity to Handle Problems	36.2%	29.7%	1.1	0.277	4393
Community Has Significant Influence in Village Affairs	42.4%	50.2%	1.54	0.131	4393
Willingness to Contribute Time to Community Development Projects	94.9%	95.4%	0.29	0.771	4393
Willingness to Contribute Resources to Community Development Projects	69.0%	51.7%	2.44	0.019	4393
Village and Household Characteristics					
Access to Electricity	32.8%	29.1%	0.33	0.742	4393
Farming Primary Occupation	92.1%	92.9%	-0.49	0.625	4440
Poor	37.4%	33.8%	0.51	0.611	4440
Number of Household Members	5.8	5.7	0.7	0.485	4440
Gender (female)	50.6%	50.1%	-0.83	0.409	25125
Age	23.2	22.6	1.09	0.281	25125
Years of schooling	1.7	1.6	0.49	0.624	25125
Primary School in Village	97.9%	97.7%	0.13	0.898	274
Secondary School in Village	7.7%	11.2%	-1.46	0.152	268
Health Post in Village	9.6%	15.6%	-1.48	0.147	274
Time to Nearest Health Facility	106	93	0.65	0.522	240
Rice Shortage Last 12 Months	3.4	3.2	0.47	0.637	268
Price of Rice	3,900	4,140	-0.74	0.465	240
Daily Wage for Laborer	35,862	39,630	-0.86	0.399	56
Truck Access in Dry Season	92.6%	94.5%	-0.43	0.67	231

Truck Access in Rainy Season	32.2%	39.1%	-0.56	0.576	231
Access to a Rod	82.9%	85.9%	-0.33	0.741	274
Number of Households	79.8	72.6	0.73	0.472	274
Number of Minority Group Households	63.9	62.8	0.15	0.883	274

Table 2: Consumption Patterns Across Groups

Table 2	Per Capita Monthly Consumption (kip)	Monthly Food Consumption as a % of Total Consumption
Full Sample	364,365	61.7%
Non-poor	473,954	58.1%
Poor	170,524	68.1%
Lao	626,060	55.0%
Khmu	342,565	63.3%
Hmong	325,060	60.2%
Others	307,501	61.4%
No primary	325,441	63.9%
Primary	352,716	61.8%
More than Primary	499,660	56.5%
Non-farmer	500,548	58.7%
Farmer	353,256	61.9%
Phongsaly	323,333	61.1%
Oudomxai	404,079	59.6%
Luang Prabang	352,768	64.2%
Attapeu	339,530	59.9%

Table 3: Rates of Village Access for Cars/Trucks during Rainy and Dry Seasons (% of Villages)

Access to a Road	15.0%
Road is Accessible by Truck in Rainy Season	29.9%
Phongsali	5.2%
Oudomxai	31.8%
Luang Prabang	34.9%
Attapeu	47.7%
Road is Accessible by Truck in Dry Season	78.8%
Phongsali	51.7%
Oudomxai	77.3%
Luang Prabang	86.8%
Attapeu	97.7%

Table 4: Reasons for Not Selling Products Outside the Village (% of Households)

Distance	41.0%
Cost	18.0%
No Buyer at District Market	6.7%
Price is Better in the Village	10.2%
Road Condition Poor	14.7%
No Transport	8.0%
Other	1.3%

Table 5: Average Time and Cost required to Reach the District Center

	Time to District Center (minutes)	Cost of Transport to District Center (kip)
Full Sample	185	23,468
Phongsali	220	35,948
Oudomxai	186	16,710
Luang Prabang	143	22,174
Attapeu	268	32,467

Table 6: Health and Education Utilization Rates

	% of Sick Seeking Care	% of Children Aged 13-15 Enrolled	% of Children Aged 7-12 Enrolled
Full Sample	36.7%	71.0%	89.9%
Non-poor	44.5%	73.1%	92.4%
Poor	23.1%	68.0%	86.7%
Lao	56.0%	77.4%	95.1%
Khmu	37.1%	73.6%	91.9%
Hmong	31.4%	66.3%	84.5%
Others	29.9%	63.6%	85.0%
No primary	32.4%	65.4%	82.1%
Primary	35.8%	72.7%	92.3%
More than Primary	49.1%	80.3%	95.7%
Non-farmer	39.3%	80.2%	95.8%
Farmer	36.6%	70.6%	89.5%
Phongsaly	24.8%	56.3%	85.2%
Oudomxai	42.6%	72.1%	87.0%

Luang Prabang	34.5%	75.0%	94.4%
Attapeu	38.0%	67.4%	87.3%
Male	37.5%	76.6%	90.5%
Female	36.0%	65.7%	89.2%

Table 7: Availability of, and Time and Cost to Reach Health and Education Facilities

	Availability in Village (% of Villages)	Utilization Rates if present (% of individuals)	Utilization Rates if not present (% of individuals)	Cost to Reach Facility (kip)	Time to Facility (minutes)
Health Facility (clinic, health post)	12.4%	56%	26%	20,286	72
Lower Secondary School	9.3%	86%	68.3%	7,191	28
Primary School	95.9%	90.6%	61.4%		

Note: travel to facilities located in the village are not included in the estimation of cost. Cost and time to primary school facilities are not calculated due to the very high frequency of such schools located in the village.

Table 8: Cost of School Attendance Per Year (Millions of Kip)

School	Less Poor Household	Poor Household	Poorest Household
Primary	0.5-1	0.2-0.5	0.15
Secondary	7-8	1-3	1.6-3.5

Table 9: Rates of Access to Clean Water and Sanitation (% of Households)

	Access to Clean Water (rain collection not included)	Access to Clean Water (Rain Collection Included)	Access to Sanitation
Full Sample	4.6%	75.7%	32.8%
Non-poor	4.4%	77.7%	39.0%
Poor	4.9%	72.1%	21.9%
Lao	10.6%	74.2%	48.9%
Khmu	0.8%	79.9%	34.0%
Hmong	1.3%	76.4%	32.6%
Others	14.2%	63.9%	20.7%
Non-farmer	8.8%	77.4%	47.1%
Farmer	4.3%	75.6%	31.7%
Phongsaly	0.0%	84.4%	14.1%
Oudomxai	1.9%	78.1%	28.9%
Luang Prabang	0.4%	80.4%	45.6%
Attapeu	25.2%	51.6%	20.9%

Table 10: Participation and Access to Information (% of Households)

	Attended Most Recent Village Meeting	Spoke at a Village Meeting in the Last Six Months	Access to Information on Use of Village Funds	Access to Information on Use of Project Funds	Access on Information on Project Planning	Detailed Knowledge of the Village Development Plan
Full Sample	95.5%	33.9%	20.3%	22.5%	26.4%	33.0%
Non-poor	95.1%	37.4%	22.5%	25.5%	29.8%	36.8%
Poor	96.3%	27.6%	16.3%	17.2%	20.4%	26.3%
Lao	91.2%	42.2%	32.1%	34.1%	43.2%	40.6%
Khmu	96.0%	32.5%	21.7%	21.2%	26.3%	34.4%
Hmong	94.3%	25.0%	15.2%	19.2%	19.4%	27.3%
Others	97.0%	38.0%	12.5%	22.0%	21.3%	27.8%
Non-farmer	91.6%	32.3%	25.9%	32.4%	31.5%	34.6%
Farmer	95.8%	34.0%	19.8%	21.7%	26.0%	32.9%
Phongsaly	92.1%	40.5%	4.5%	15.8%	17.3%	33.7%
Oudomxai	94.7%	28.7%	17.4%	15.8%	22.4%	28.7%
Luang Prabang	96.0%	33.8%	26.5%	27.7%	31.0%	38.4%
Attapeu	98.3%	40.4%	21.4%	27.9%	29.3%	27.3%
Male	95.7%	38.1%	22.1%	24.9%	29.3%	38.1%
Female	95.2%	29.2%	18.3%	20.0%	23.2%	27.5%

Table 11: Accountability and Collective Action (% of Households)

	Village Government Seeking Input from the Community on a Regular Basis	Satisfaction with Village Government Capacity to Handle Problems	Community Has Significant Influence in Village Affairs	Petitioned the Government in the Last Twelve Months	Community Can Reverse Decisions Taken by the Village Head
Full Sample	83.9%	66.7%	45.8%	8.4%	44.6%
Non-poor	84.1%	67.7%	48.1%	9.5%	47.8%
Poor	83.6%	64.8%	41.7%	6.4%	39.0%
Lao	77.6%	74.4%	38.4%	10.8%	50.6%
Khmu	85.3%	65.9%	50.8%	8.6%	51.1%
Hmong	73.4%	64.4%	46.9%	10.4%	36.8%
Others	88.8%	65.8%	34.6%	5.5%	26.4%
Non-farmer	76.9%	56.2%	44.8%	9.3%	40.7%
Farmer	84.5%	67.5%	45.9%	8.3%	44.9%
Phongsaly	90.1%	58.4%	45.8%	2.2%	38.6%
Oudomxai	75.4%	72.5%	46.1%	3.9%	45.1%
Luang Prabang	88.1%	62.3%	52.3%	14.8%	52.1%
Attapeu	86.8%	71.7%	27.8%	5.5%	27.9%
Male	85.0%	65.6%	45.2%	8.6%	43.5%
Female	82.8%	67.8%	46.5%	8.1%	45.8%

Table 12: Communal Capacity and Trust (% of Households)

	Willingness to Contribute Time to Community Development Projects	Willingness to Contribute Resources to Community Development Projects	Trust Community Member to Purchase Goods at Market when Given Funds	Ability to Borrow Funds Outside of Family Network
Full Sample	95.1%	61.4%	93.7%	75.6%
Non-poor	95.4%	64.1%	94.1%	80.8%
Poor	94.7%	56.5%	93.0%	66.3%
Lao	97.9%	70.8%	98.1%	80.8%
Khmu	96.8%	65.0%	93.6%	72.4%
Hmong	93.7%	73.0%	84.9%	74.9%
Others	89.5%	39.7%	96.2%	82.4%
Non-farmer	97.2%	66.8%	97.1%	72.6%
Farmer	95.0%	60.9%	93.4%	75.8%
Phongsaly	92.6%	43.1%	95.6%	88.5%
Oudomxai	96.3%	68.0%	91.7%	72.5%
Luang Prabang	97.3%	69.3%	93.7%	74.1%
Attapeu	88.8%	39.3%	96.6%	76.8%
Male	95.9%	62.0%	92.4%	77.2%
Female	94.3%	60.7%	95.2%	73.8%

Table 13: Rate of Disability (% of Individuals)

	% of Persons with Difficulty Seeing	% of Persons with Difficulty Hearing	% of Persons with Difficulty Walking	% of Persons with Difficulty Concentrating	% of Persons with Difficulty Washing	% of Persons with Difficulty Communicating	% of Persons with Any Disability
Phongsali	2.1%	1.4%	1.3%	1.8%	1.0%	0.9%	4.6%
Oudomxai	6.8%	4.4%	4.4%	3.7%	3.6%	2.5%	11.9%
Luang Prabang	6.5%	4.4%	2.5%	1.8%	1.5%	1.1%	9.8%
Attapeu	8.9%	5.7%	6.2%	5.7%	4.1%	1.6%	13.1%
Total	6.3%	4.1%	3.6%	3.1%	2.5%	1.6%	10.2%

Table 14: Number of Observations by Subgroup

Subgroup	**Number of Observations**
Full Sample	4393
Non-poor	2,627
Poor	1,766
Lao	340
Khmu	2,444
Hmong	502
Others	1,107
No primary	1,168
Primary	2,729
More the Primary	496
Non-farmer	351

Farmer	4,042
Phongsaly	800
Oudomxai	1,193
Luang Prabang	1,600
Attapeu	800
Male	2,240
Female	2,153

Annex B: Power Calculations and Analysis

Analysis

Balancing tests were conducted using comparison of means tests and Kolmogorov-Smirnov tests of equivalence of distribution using the sampling weights discussed in the main text. Differences were considered significant if at the 10% level or below. This level of significance was chosen in order to be more conservative with respect to correction for potential pre-project differences. Descriptive statistics were calculated as simple means of sub-groups using the sampling weights discussed above in the main text.

Power Calculations

The table below lists the number of total kum ban required to meet the sample size requirements assuming 100 households are surveyed per kum ban. The most recent national household survey, LECS4 (collected in 2007/2008) was used to generate key parameters. A sample size of 44 kum ban and 4400 households will be enough to satisfy requirements for all key indicators listed below. Roads are calculated based on required number of villages rather than households. Calculations were made for per capita consumption but requirements significantly exceed available locations based on the PRF II implementation plan for number of districts and in the four new provinces.

Table 1:
Number of kum ban to Meet Sample Size Requirements (assuming 100 households per kumbanh):

	All Rural	Rural No Road	Rural with Road	4 Target Provinces Rural
Poverty	34	38	36	36
Enrollment Secondary (12-15)	22	30	22	20

Enrollment Secondary (15-17)	42	40	42	42
Percent Seeking Health Care When Sick	30	30	36	30
Percent Seeking Health Care When Sick and Perceived as Serious	34	36	34	42
Adequate Sanitation	34	38	34	36
Adequate Drinking Water Source Dry Season	42	38	38	40
Access to Road	44			
Road Passable in Rainy Season	42			

Notes:

All power calculations completed using Optimal Design for Multilevel Longitudinal Research Software and confirmed using standard power calculation modules in STATA. Sample sizes reflect a power of 80% at a 5% significance level with an assumed range for the change in control locations over time of +/- 5% for all indicators.

- Water Source: Adequate is defined as piped in water or protected well according to LECS4 survey instrument
- Sanitation: Adequate is defined as modern or normal toilet acceding to LECS4 survey instrument.
- Poverty: Poverty incidence calculated using National Poverty Lines for 2007/2008 LECS4 survey.
- Health: Seeking Care When Sick and Serious Drops Response of "Not Serious Enough" as reason for not seeking care from consideration
- Education: school enrollments (LECS4).

Additional Note on Kumbanh vs. Village Level Variation and Power Calculations:

Although there are a small number of kumbanh and randomization is conducted at that level, the Kumbanh is recent phenomenon with little actual governmental and administrative impact on the region. Thus, variation is based on geographic/physical proximity rather than membership of an administrative unit. Within Kumbanh, there is significant variation from village to village with respect to service delivery, road access, and economic status. Therefore, the variance due to being located within a kumbanh is very low relative to the village level and is reflected in the ICC calculations. When we look at the number of villages in the sample (320) similar power calculations using village level parameters indicate that this will be sufficient to look at utilization rate and other binary variable questions including subsamples. Thus while there will be some loss of power due to concentration of the village locations in Kumbanh, this will be far less in the Lao context in comparison than with other countries.

Annex C: Results Framework Performance Indictors

Results Framework Indicator	Relevant Survey Indicator	Overall	Lowest Two Quintiles
% increase school enrollment	% of Children Aged 7-12 Enrolled	89.9%	86.6%
% increase school enrollment	% of Children Aged 13-15 Enrolled	71.0%	68.0%
% increase in access and utilization of health services	% Seeking Care When Sick	36.7%	23.1%
% increase in access to and utilization of safe water sources and adequate sanitation	% of households with Access to Safe Water (rain water not included)	4.6%	4.8%
% increase in access to and utilization of safe water sources and adequate sanitation	% of households with Access to Safe Water (rain water included)	75.7%	72.0%
% increase in access to and utilization of safe water sources and adequate sanitation	% of Villages with Access to a Road	84.3%	
% increase in access to and utilization of roads	% of Villages with Car/Truck Accessible Roads in Rainy Season	30.0%	
% increase in access to and utilization of roads	For all villagers, % of households who sell products outside the village	2.8%	1.9%
% increase in access to and utilization of roads	For villagers who sell products, % of households who sell products outside the village	6.2%	5.0%
Decision-making on allocation of PRF resources involve at least 60% of poorest community members	% of households attending Most Recent Village Meeting	95.5%	66.3%
Greater than 75% satisfaction levels reported by beneficiaries in targeted villages regarding improved services and local development planning.	% of households Speaking at Most Recent Village Meeting	33.9%	27.6%
Greater than 75% satisfaction levels reported by beneficiaries in targeted villages regarding improved services and local development planning.	% of households Satisfied with Village Government Capacity to Handle Problems	66.7%	64.8%

Note: Results for households in the lowest two quintiles of consumption distribution are included as stated in the Results Framework.